



# ROYAL ACADEMY OF MEDICINE IN IRELAND

## IRISH JOURNAL OF MEDICAL SCIENCE

*60th Annual and Scientific Meeting of the  
Irish Gerontological Society*

*Meeting Programme & Abstracts*

*Brookfield Health Sciences Complex  
University College Cork*

*14th and 15th September 2012*

**Irish Journal of Medical Science  
Volume 181 Supplement 7  
DOI 10.1007/s11845-012-0842-5**

 Springer



Irish  
Gerontological  
Society

Caring for older adults

**Irish Gerontological Society**  
**60<sup>th</sup> Annual and Scientific Meeting**  
Brookfield Health Sciences Complex  
University College Cork  
14<sup>th</sup>-15<sup>th</sup> September 2012



Celebrating  
our 60<sup>th</sup>  
Jubilee!

---

National Executive Committee

Professor J. Bernard Walsh (President)  
Ms. Mo Flynn (Hon Secretary)  
Dr. Rose Galvin (Hon Treasurer)  
Dr. Claire Donnellan  
Mr. Neill Dunne  
Dr. Maria Moran  
Dr. Riona Mulcahy  
Ms. Clare O'Sullivan  
Mr. Robin Webster

---

Annual Scientific Committee 2012 (Conference Organising Committee)

Professor J. Bernard Walsh (President)  
Ms. Mo Flynn (Hon Secretary)  
Dr. Rose Galvin (Hon Treasurer)  
Dr. Mike O' Connor (Local Lead)  
Ms. Miriam Ahern (Strategy and Development)  
Dr. Paul Gallagher  
Dr. Kieran O' Connor  
Dr. Denis O'Mahony  
Ms. Clare O' Sullivan  
Dr. Suzanne Timmons  
Ms. Olivia Wall

---

---

### **Disclosure Statement**

Supported by unrestricted educational grant from

Amgen  
A Menarini Pharmaceuticals Ireland Ltd  
Bayer  
Boehringer  
Daiichi Sankyo  
Lilly  
Lundbeck Ireland Ltd  
MSD  
Orion Pharma Ireland Ltd  
Pfizer Healthcare Ireland  
Servier Laboratories (Ireland) Ltd  
Shire Pharmaceuticals Ireland Ltd  
Takeda Products Ireland Ltd

---

It is with great pleasure that I welcome you on behalf of the Scientific Committee to the 60th Annual Scientific Meeting of the Irish Gerontological Society. We too have our Jubilee! This year we are again trying a new venue in the Brookfield Health Sciences Centre in University College Cork.

We are delighted to be in a facility that hosts so many of the disciplines involved in the care of older people. Indeed it has inspired us in terms of the programme for this year's meeting which has the overall title of "Caring for Older Adults". You will note that we have doubled the size of the programme with parallel sessions running throughout the 2 days. The Scientific Committee felt that because of the range and depth of the submissions received, it would be important provide the opportunity to showcase far more of the research across all the pillars of gerontology. Along with the fifty-one oral presentations there are 193 posters to be viewed.

This years' programme provides a platform for a range of new and exciting studies to be shared. Taking the theme "Caring for Older Adults" each of the following sessions Policy and Diversity, Osteoporosis and Bone Health, Physical Activity, Exercise and Falls programmes, Hospitals, Community, Nursing Homes, Therapeutics, After Stroke and Cognitive impairment and assessment has a range of interesting and stimulating studies presented.

We are delighted that the Willie Bermingham Memorial Lecture will be delivered by Prof Martin O'Donnell Associate Professor of Translational Medicine, NUI Galway on "Atrial Fibrillation in the Elderly"

Our keynote speakers this year will be Professor Jeanne Jackson speaking about "Well Elderly and Lifestyle Redesign studies", Dr Liam Plant on "The Cardio-Renal Syndromes: Prognosis and Management in Older Adults" and Professor Robert H Logie on "Working memory in healthy ageing and Alzheimer's Disease". These all promise to be stimulating talks.

We were delighted that The Atlantic Philanthropies awarded us the 3 year grant as advised to you all last year. We have since recruited Miriam Ahern to lead on strategy implementation and I hope many of you are already seeing the benefits with the developing website and other activities. There is much more to come! Be sure and attend the AGM on Friday lunchtime when we will brief you on our plans.

My thanks to the organising committee in Cork, to Miriam Ahern and to the IGS Executive committee for their considerable work in bringing this meeting together. There was some very rapid learning to be done but hopefully all of the effort will ensure that this is a meeting to be remembered.

Have a wonderful time with lots of networking, knowledge sharing and craic!

Mo Flynn,  
Honorary Secretary, on behalf of the Scientific Committee

60<sup>th</sup> Annual and Scientific Meeting - Programme*Caring for Older Adults***Friday 14<sup>th</sup> September 2012****09.00–09.45** Registration**09.45–09.55** Welcoming Address**Professor J. Bernard Walsh, President, Irish Gerontological Society**  
(Lecture Theatre 1 with live AV feed to Theatre 2)**Session 1****Lecture Theatre 1***Co-chairs**Dr. Michael O' Connor**Consultant Geriatrician, Cork University/St Finbarr's Hospitals**Ms. Mary Foley,**Advanced Nurse Practitioner**St Finbarr's Hospital**Vice-president All Ireland Gerontological Nurses Association***Lecture Theatre 2***Co-chairs**Professor Suzanne Cahill**Associate Professor**Director of the Dementia Services Information and Development Centre, Trinity College Dublin**Professor Cillian Twomey**Intern network Coordinator, South Intern Network***10.00–11.00** ***Osteoporosis and Bone Health (Lecture Theatre 1)*****O1 A comparison of the prescription of bone health medications between general practitioner led and geriatrician led nursing homes****O2 Osteoporosis: A Clinical Nurse Specialist-Led Pre-assessment Clinic****O3 Zoledronic Acid in osteoporosis; Who responds better?****O4 The Development of a Mathematical Model to predict the Time to Osteoporosis (TTO) using DEXA (Dual-Energy X-Ray Absorptiometry) Scanning****O5 Effect Of Orthostatic Hypotension On Bone Mineral Density Amongst Older Irish Adults***Policy and Diversity (Lecture Theatre 2)***O6 Ageing, Diversity and Poverty Across the Life-Course****O7 Promoting inclusion in later life: contrasting policy responses****O8 Deprivation in cold weather increases the risk of hospital admission with hypothermia in older people****O9 An exploration of the perceptions of ageing of older adults with an intellectual disability****O10 An exploration of the employment status of people over forty with an intellectual disability in Ireland****11.00–11.30** Tea/Coffee, poster viewing and pharmaceutical stands**Session 2****Lecture Theatre 1***Co-chairs**Ms. Clare O'Sullivan**Lecturer, Department of Occupational Science & Occupational Therapy, UCC**Professor Davis Coakley**Professor of Medical Gerontology**Trinity College Dublin***Lecture Theatre 2***Co-chairs**Dr. Denis O'Mahony**Senior Lecturer, UCC and Consultant Geriatrician, Cork University/St Finbarr's Hospitals**Ms. Imelda Noone**Advance Nurse Practitioner in Stroke, St Vincent's Hospital*

- 11.30–12.00**    **Keynote Update: Well Elderly and Lifestyle Redesign Studies**  
*Professor Jeanne Jackson, PhD., OTR/L, FAOTA*  
*Chair, Department of Occupational Science and Occupational Therapy, University College Cork*  
 (Live AV feed to Theatre 2)
- 12.00–12.45**    **Physical Activity, Exercise and Falls Programme 1 (Lecture Theatre 1)**
- O11 An Augmented Exercise Programme In The Acute Setting Can Improve Mobility And Quality Of Life In Frail Hospitalised Older Patients: A Controlled Trial**
- O12 The Frailty Index in Europeans: association with age and mortality**
- O13 LSVT BIG Exercise Therapy Programme for People with Parkinson's Disease**  
*In Hospitals (Lecture Theatre 2)*
- O14 Use Of Care Bundles as a Practice Development Initiative Across 3 Departments in Non-Acute Hospital Setting**
- O15 Care Planning Meetings: Participation for whom?**
- O16 The success of a Medical Admission Proforma on thromboprophylaxis use in acute medical inpatients in a hospital practising an integrated model of elderly care**
- 12.45–13.30**    Lunch, poster viewing, marking and pharmaceutical stands
- 13.30–14.00**    **IGS Annual General Meeting**
- Session 3**      **Lecture Theatre 1**  
*Co-chairs*  
*Professor Willie Molloy*  
*Centre for Gerontology and Rehabilitation, UCC*
- Dr. Rose Galvin*  
*HRB Centre for Primary Care Research*  
*Royal College of Surgeons*
- Lecture Theatre 2**  
*Co-chairs*  
*Dr. Josie Clare*  
*Consultant Physician, Cork University Hospital*
- Dr. Paul Gallagher*  
*Consultant Geriatrician, Cork University/St Finbarr's Hospitals*
- 14.15–15.15**    **Physical Activity, Exercise and Falls Programme 2 (Lecture Theatre 1)**
- O17 Timed-Up-and-Go and Walking Speed can Identify Frail Members of the Older Population**
- O18 Physical Activity in Older People in Ireland and the Factors that Influence it**
- O19 An exploratory study of older person's outdoor mobility**
- O20 The Effect of a Balance Class on Patients Deemed at Risk of Falls**
- O21 The Impact of Positive Affect on Falls and Fear of Falling in the Older Adult Population**  
*Therapeutics (Lecture Theatre 2)*
- O22 Drug adversity in older patients: Where's the HIPE?**
- O23 Persistence and dose escalation of anti-dementia medications**
- O24 Prevention of Adverse Drug Events in Hospitalised Older Patients: a randomised controlled trial**
- O25 Adverse Drug Reactions during Hospitalisation: can they be predicted on arrival to the Emergency Department?**
- 15.15–15.45**    **Keynote Update: The Cardio-Renal Syndromes: Prognosis and Management in Older Adults**  
*Dr. Liam Plant Consultant Renal Physician at Cork University Hospital, and Clinical Senior Lecturer in Nephrology at University College Cork*  
*Current National Clinical Director of the HSE National Renal Office*  
 (Live AV feed to Theatre 2)
- 15.45–16.15**    Tea/Coffee, poster viewing and pharmaceutical stands

**Session 4****Lecture Theatre 1***Co-chairs**Dr. Kieran O' Connor**Consultant Geriatrician, Mercy University/St Finbarr's Hospitals**Professor Desmond O'Neill**Professor of Medical Gerontology TCD**Consultant Geriatrician AMNCH***Lecture Theatre 2***Co-chairs**Dr. Norma Harnedy**Consultant Geriatrician, Cork University/St Finbarr's Hospitals**Ms. Mo Flynn**Chief Executive, Our Lady's Hospice and Care Services, Dublin***16.15–17.30*****After Stroke (Lecture Theatre 1)*****O26 A Population-based Comparison of Total Costs: The Economic Burden of Atrial Fibrillation-Associated Stroke****O27 Co-morbidity and outcome in stroke patients compared to other emergency medical admissions****O28 Age-specific risk and severity of bleeding on aspirin-based secondary prevention: a population-based study****O29 Patient Beliefs About the Efficacy of Medications Used for Secondary Prevention in Stroke****O30 Symptomatic orthostatic hypotension is associated with subjective memory complaints in a sample of community dwelling older adults****O31 Hypotensive events induce stroke, particularly in the older person****O32 Intra-arterial Treatment with Thrombectomy devices, Stenting and Thrombolysis for the Treatment of Acute Ischaemic Stroke: A Case Series 2010-2011*****In the Community (Lecture Theatre 2)*****O33 Publicly funded home care for older people in Ireland: Determinants of utilisation and policy implications****O34 The Impact Of Being The Intermediate Caring Generation On Self-Reported Health of Older Women In Ireland. Analysis Of The Irish Longitudinal Study Of Ageing (TILDA 2010)****O35 Here Today Gone Tomorrow?: The Development Of Housing With Care For People With Dementia In Ireland****O36 The Community Assessment of Risk Tool, (CART):Investigation of Inter-Rater Reliability for a New Instrument Measuring Risk of Adverse Outcomes in Community Dwelling Older Adults****O37 Loneliness and isolation among community based older adults: is there an association with age friendliness?****O38 Measuring the pain: Loneliness among midlife and older adults****17.30–18.30*****Willie Bermingham Lecture: Atrial Fibrillation in the Elderly****Professor Martin O'Donnell, MB, PhD, MRCPI, Associate Professor of Translational Medicine, NUI Galway and Associate Director, Clinical Research Facility, Galway**(Live AV feed to Theatre 2)***20.00*****60<sup>th</sup> Jubilee Dinner at River Lee Hotel*****Saturday 15<sup>th</sup> September****Session 5****Lecture Theatre 1***Co-chairs**Dr. Richard Liston**Consultant Geriatrician, Kerry General Hospital**Dr. Suzanne Timmons**Senior Lecturer, Centre for Gerontology and Rehabilitation, UCC***Lecture Theatre 2***Co-chairs**Ms. Olivia Wall**Practice Tutor, Department of Occupational Science & Occupational Therapy, UCC**Dr. Pat Barry**Consultant Physician, Cork University Hospital*

- 10.00–10.30** *Keynote Update: Working Memory in Healthy Ageing and Alzheimer's Disease*  
*Professor Robert H Logie*  
*Professor of Human Cognitive Neuroscience, Centre for Cognitive Ageing and Cognitive Epidemiology, University of Edinburgh*  
 (Live AV feed to Theatre 2)
- 10.30–11.30** *Cognitive Impairment and Assessment 1 (Lecture Theatre 1)*
- O39** Predictors of Cognitive Reserve in Healthy Ageing
- O40** Screening Cognitive Impairment in a Movement Disorder Clinic: Comparison of the Montreal Cognitive Assessment to the SMMSE
- O41** The Quick Mild Cognitive Impairment (Qmci) screen: A new screening tool for Mild Cognitive Impairment
- O42** Cognitive impairment increases risk of infection, recurrence and death due to hospital-onset *C. difficile*
- O43** The Development of the Attitudes to Personal Ageing Scale – Measuring Attitudes to Self-Ageing
- In Nursing Homes (Lecture Theatre 2)*
- O44** The Influence of Clinical Governance Alternatives on Emergency Department Utilization and Mortality Rates in a Publicly Funded Elderly Residential Care Home (Nursing Home)
- O45** Predicting the In-Patient Outcomes of Acute Medical Admissions from the Nursing Home
- O46** Nursing home residents in the Emergency Department- a cohort study
- O47** NH-ACE (Nursing Home Acute Care Evaluation) ; A Targeted Intervention in Nursing Home Patients to Enhance Access to Appropriate Acute Care
- 11.30–12.00** Tea/Coffee, poster viewing and pharmaceutical stands
- Session 6** **Lecture Theatre 1**  
 Co-chairs  
 Dr. Riona Mulcahy  
*Consultant Geriatrician and Dean of Undergraduate Studies, RCSI/Waterford Regional Hospital*  
 Dr. Mike O'Connor  
*Consultant Geriatrician, Cork University/St Finbarr's Hospitals*
- 12.00–13.00** *Cognitive Impairment and Assessment 2*
- O48** Delirium in Older Hospital Inpatients: Incidence, Prevalence and Motor Subtyping
- O49** Knowledge, skills, and attitudes of clinicians towards the assessment of cognition in older patients in the emergency department
- O50** TUDA (The Trinity, University of Ulster and Department of Agriculture Study): RBANS specificity In An Elderly Out-Patient Cohort
- O51** A group intervention to reduce burden and symptoms of depression in informal dementia caregivers
- 13.00–13.30** Awards and close



## PLATFORM

### **O1 A Comparison of the Prescription of Bone Health Medications Between General Practitioners Led and Geriatrician Led Nursing Homes**

Cora McGreevy, Miriam Barry, Alan Moore, Ciaran Donegan, David Williams  
Royal College of Surgeons Ireland, Beaumont Hospital, Dublin, Ireland

### **O2 Osteoporosis: A Clinical Nurse Specialist-Led Pre-assessment Clinic**

Nessa Fallon, Kara Fitzgerald, Georgina Steen, Niamh Maher, Rosaleen Lannon, Eilish McDermott, Miriam Casey, JB Walsh  
Bone Health Service, Mercers Institute for Research on Ageing, St James's Hospital, Dublin, Ireland

### **O3 Zoledronic Acid in Osteoporosis: Who Responds Better?**

Najia Siddique<sup>1</sup>, Ng Kin Cheung<sup>1</sup>, Kathleen Bennett<sup>1</sup>, Rosaleen Lannon<sup>1</sup>, Aoife Quinn<sup>1</sup>, Claire Harney<sup>2</sup>, MC Casey<sup>1</sup>, JB Walsh<sup>1</sup>

<sup>1</sup>Bone health service, Mercers Institute for Research on Ageing, St. James's Hospital, Dublin, Ireland, <sup>2</sup>Diagnostic imaging, St. James's Hospital, Dublin, Ireland

### **O4 The Development of a Mathematical Model to Predict the Time to Osteoporosis (TTO) Using DEXA (Dual-Energy X-Ray Absorptiometry) Scanning**

Paul Scully, Catherine Peters, Sheila Carew, Aine Costelloe, Tina Sheehy, Margaret O'Connor, Declan Lyons  
Mid-Western Regional Hospital, Limerick, Ireland

### **O5 Effect of Orthostatic Hypotension on Bone Mineral Density Amongst Older Irish Adults**

AM O'Mahony, GM Savva, RA Kenny  
Trinity College Dublin, Dublin, Ireland

### **O6 Ageing, Diversity and Poverty Across the Life-Course**

Kieran Walsh, Caroline Finn, John Cullinan, Thomas Scharf  
National University of Ireland Galway, Galway, Ireland

### **O7 Promoting Inclusion in Later Life: Contrasting Policy Responses**

Thomas Scharf  
National University of Ireland Galway, Galway, Ireland

### **O8 Deprivation in Cold Weather Increases the Risk of Hospital Admission with Hypothermia in Older People**

Roman Romero-Ortuno, Maria Tempny, Lydia Dennis, Bernard Silke  
Division of Internal Medicine, St James's Hospital, Dublin, Ireland

### **O9 An Exploration of the Perceptions of Ageing of Older Adults with an Intellectual Disability**

Mary McCarron, Eilish Burke, Rachael Carroll, Philip McCallion  
Trinity College Dublin, Dublin, Ireland

### **O10 An Exploration of the Employment Status of People Over Forty with an Intellectual Disability in Ireland**

Mary McCarron, Eimear McGlinchy, Rachael Carroll, Philip McCallion  
Trinity College Dublin, Dublin, Ireland

### **O11 An Augmented Exercise Programme in the Acute Setting Can Improve Mobility and Quality of Life in Frail Hospitalised Older Patients: A Controlled Trial**

Ruth McCullagh<sup>1</sup>, Eilis Fitzgerald<sup>4</sup>, Ruth Martin<sup>2</sup>, Carol Kennedy<sup>1</sup>, Niamh O'Reilly<sup>1</sup>, Kieran O'Connor<sup>2</sup>, Suzanne Timmons<sup>3</sup>  
<sup>1</sup>Physiotherapy Department, Mercy University Hospital, Cork, Ireland, <sup>2</sup>Department of Geriatric Medicine, Mercy University Hospital, Cork, Ireland, <sup>3</sup>Department of Gerontology & Rehabilitation, University College Cork, Cork, Ireland, <sup>4</sup>School of Physiotherapy, Royal College of Surgeons in Ireland, Dublin, Ireland

### **O12 The Frailty Index in Europeans: Association with Age and Mortality**

Roman Romero-Ortuno, Rose Anne Kenny  
Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland

### **O13 LSVT BIG Exercise Therapy Programme for People with Parkinson's Disease**

Suzanne Ryan, Siobhan Quinn, Ronan Collins, Tara Coughlan, Sean Kennelly, Desmond O'Neill  
Tallaght Hospital, Dublin, Ireland

### **O14 Use of Care Bundles as a Practice Development Initiative Across Three Departments in a Non-acute Hospital Setting**

Eileen Shinnors, Penny Long, Avril Tupas, Libby McGrane  
Our Lady's Hospice & Care Services, Dublin, Ireland

### **O15 Care Planning Meetings: Participation for Whom?**

Sarah Donnelly<sup>1</sup>, Suzanne Cahill<sup>2</sup>, Des O'Neill<sup>1</sup>, Robbie Gilligan<sup>2</sup>, Brenda Mehigan<sup>1</sup>, Ronan Collins<sup>1</sup>  
<sup>1</sup>Tallaght Hospital, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland

### **O16 The Success of a Medical Admission Proforma on Thrombo-prophylaxis Use in Acute Medical In-patients in a Hospital Practising an Integrated Model of Elderly Care**

Elmuataz Osman Ahmed<sup>1</sup>, Niall Colwell<sup>1</sup>, Christina Donnellan<sup>1</sup>, Sam Kingston<sup>1</sup>, Clare O'Leary<sup>1</sup>, Paud O'Regan<sup>2</sup>, Isweri Pillay<sup>1</sup>  
<sup>1</sup>South Tipperary General Hospital, Western Road, Clonmel, Co. Tipperary, Ireland, <sup>2</sup>University College Cork, Cork, Ireland

**O17 Timed-Up-and-Go and Walking Speed Can Identify Frail Members of the Older Population**

George Savva<sup>1</sup>, Orna Donoghue<sup>1</sup>, Frances Horgan<sup>2</sup>, Claire O'Regan<sup>1</sup>, Hilary Cronin<sup>1</sup>, Rose Anne Kenny<sup>0</sup>  
<sup>1</sup>Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Royal College of Surgeons in Ireland, Dublin, Ireland

**O18 Physical Activity in Older People in Ireland and the Factors that Influence It**

Gabrielle McKee<sup>1</sup>, Patricia Kearney<sup>2</sup>, Hilary Cronin<sup>1</sup>, Claire O'Regan<sup>1</sup>, George Savva<sup>1</sup>, Rose Anne Kenny<sup>1</sup>  
<sup>1</sup>Trinity College Dublin, Dublin, Ireland, <sup>2</sup>University College Cork, Cork, Ireland

**O19 An Exploratory Study of Older Persons Outdoor Mobility**

Jamie Sheehy, Clare O'Sullivan  
 PCCC Physiotherapy HSE South, Cork City, Ireland

**O20 The Effect of a Balance Class on Patients Deemed at Risk of Falls**

Helen T Fitzgerald, Elizabeth A Kelso  
 St Luke's Hospital, Kilkenny, Ireland

**O21 The Impact of Positive Affect on Falls and Fear of Falling in the Older Adult Population**

Aisling O'Halloran, Rose Anne Kenny  
 TILDA, Trinity College, Dublin, Ireland

**O22 Drug Adversity in Older Patients: Where's the HIPE?**

Marie O'Connor, Keith McGrath, Denis O'Mahony, Paul Gallagher  
 Department of Geriatric Medicine, Cork University Hospital, Cork, Ireland

**O23 Persistence and Dose Escalation of Anti-dementia Medications**

Linda Brewer<sup>1</sup>, Kathleen Bennett<sup>2</sup>, David Williams<sup>1</sup>  
<sup>1</sup>Department of Stroke and Geriatric Medicine, Royal College of Surgeons of Ireland, Dublin, Ireland, <sup>2</sup>Department of Pharmacology and Therapeutics, Trinity Centre for Health Sciences, Dublin, Ireland

**O24 Prevention of Adverse Drug Events in Hospitalised Older Patients: A Randomised controlled Trial**

Marie O'Connor<sup>1</sup>, David O'Sullivan<sup>2</sup>, Paul Gallagher<sup>1</sup>, Stephen Byrne<sup>2</sup>, Joseph Eustace<sup>3</sup>, Denis O'Mahony<sup>1</sup>  
<sup>1</sup>Department of Geriatric Medicine, Cork University Hospital, Ireland, <sup>2</sup>School of Pharmacy, University College Cork, Ireland, <sup>3</sup>Health Research Board Clinical Research Facility, Mercy University Hospital, Cork, Ireland

**O25 Adverse Drug Reactions During Hospitalisation: Can They Be Predicted on Arrival to the Emergency Department?**

Marie O'Connor<sup>1</sup>, Paul Gallagher<sup>1</sup>, Denis O'Mahony<sup>1</sup>  
<sup>1</sup>Department of Geriatric Medicine, Cork University Hospital, Cork, Ireland, <sup>2</sup>School of Medicine, University College Cork, Cork, Ireland

**O26 A Population-based Comparison of Total Costs: The Economic Burden of Atrial Fibrillation-Associated Stroke**

Niamh Hannon<sup>1</sup>, Samantha Smith<sup>2</sup>, Sean Murphy<sup>1</sup>, Danielle Ní Chróinín<sup>1</sup>, Elizabeth Callaly<sup>1</sup>, Michael Marnane<sup>1</sup>, Áine Merwick<sup>1</sup>, Órla Sheehan<sup>1</sup>, Joseph Duggan<sup>1</sup>, Lorraine Kyne<sup>1</sup>, Eamon Dolan<sup>3</sup>, Alan Moore<sup>4</sup>, Peter J Kelly<sup>1</sup>  
<sup>1</sup>Mater Misericordiae University Hospital, Dublin, Ireland, <sup>2</sup>Economic and Social Research Institute, Dublin, Ireland, <sup>3</sup>Connolly Hospital, Dublin, Ireland, <sup>4</sup>Beaumont Hospital, Dublin, Ireland

**O27 Co-morbidity and Outcome in Stroke Patients Compared to Other Emergency Medical Admissions**

Karl Boyle, Elizabeth Callaly, Declan Byrne, Joseph Harbison, Bernard Silke  
 St James's Hospital, Dublin, Ireland

**O28 Age-Specific Risk and Severity of Bleeding on Aspirin-based Secondary Prevention: A Population-Based Study**

OC Geraghty, Z Mehta, PM Rothwell  
 Stroke Prevention research Unit, Department of Clinical Neuroscience, University of Oxford, Oxford, UK

**O29 Patient Beliefs About the Efficacy of Medications Used for Secondary Prevention in Stroke**

Rebecca Geary<sup>1</sup>, Racheal Mulpeter<sup>1</sup>, Joe Harbison<sup>1</sup>, Jaspreet Bhangu<sup>2</sup>  
<sup>1</sup>Trinity College, Dublin, Ireland, <sup>2</sup>St James's Hospital, Dublin, Ireland

**O30 Symptomatic Orthostatic Hypotension is Associated with Subjective Memory Complaints in a Sample of Community Dwelling Older Adults**

Celia O'Hare, Brian Lawlor, Rose Anne Kenny  
 TRIL (Technology Research for Independent Living), Dublin, Ireland

**O31 Hypotensive Events Induce Stroke, Particularly in the Older Person**

Daniel Ryan<sup>1</sup>, Soren Christensen<sup>2</sup>, James Meaney<sup>1</sup>, Andrew Fagan<sup>1</sup>, Roseanne Kenny<sup>1</sup>, Joseph Harbison<sup>1</sup>  
<sup>1</sup>St. James's Hospital, Dublin, Ireland, <sup>2</sup>Brain Imaging Laboratory, Melbourne, Australia

**O32 Intra-Arterial Treatment with Thrombectomy Devices, Stenting and Thrombolysis for the Treatment of Acute Ischaemic Stroke: A Case Series 2010–2011**

Stephanie Robinson<sup>1</sup>, Sarah Power<sup>1</sup>, Eline Appelmans<sup>1</sup>, Eamon Dolan<sup>3</sup>, Ciaran Donegan<sup>1</sup>, Alan Moore<sup>1</sup>, Sean Murphy<sup>2</sup>, Paul Brennan<sup>1</sup>, John Thornton<sup>1</sup>, David Williams<sup>1</sup>  
<sup>1</sup>Beaumont Hospital, Dublin, Ireland, <sup>2</sup>Mater Hospital, Dublin, Ireland, <sup>3</sup>Connolly Hospital, Dublin, Ireland, <sup>4</sup>Royal College of Surgeons in Ireland, Dublin, Ireland

**O33 Publicly Funded Home Care for Older People in Ireland: Determinants of Utilisation and Policy Implications**Catriona Murphy<sup>1</sup>, Brendan Whelan<sup>2</sup>, Charles Normand<sup>2</sup><sup>1</sup>Dublin City University, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland**O34 The Impact of Being the Intermediate Caring Generation on Self-Reported Health of Older Women in Ireland: Analysis of the Irish Longitudinal Study of Ageing (TILDA 2010)**

Christine A McGarrigle, Hilary Cronin, Rose Anne Kenny

TILDA, Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland

**O35 Here Today Gone Tomorrow? The Development of Housing with Care for People with Dementia in Ireland**

Janet Convery

Trinity College Dublin, Dublin, Ireland

**O36 The Community Assessment of Risk Tool, (CART): Investigation of Inter-Rater Reliability for a New Instrument Measuring Risk of Adverse Outcomes in Community Dwelling Older Adults**Ronan O Caoimh<sup>1</sup>, Elizabeth Healy<sup>2</sup>, Elizabeth O Connell<sup>3</sup>, Yang Gao<sup>1</sup>, D. William Molloy<sup>1</sup><sup>1</sup>Centre for Gerontology & Rehabilitation, St. Finbarr's Hospital, Cork, Ireland, <sup>2</sup>Ballincollig & Viaduct Public Health Centre, Cork, Ireland,<sup>3</sup>Mahon & Ballintemple Public Health Centre, Cork, Ireland**O37 Loneliness and Isolation Among Community Based Older Adults: Is There an Association with Age Friendliness?**

Yohana Skeet, Aoife Bailey, Elaine Crosby, Patricia Greville, Amina Jaji, Ann O'Hanlon, Catherine McConville

Netwell Centre, Dundalk Institute of Technology, Dundalk, Ireland

**O38 Measuring the Pain: Loneliness Among Midlife and Older Adults**

Catherine McConville, John McEvoy, Ann O'Hanlon, Rodd Bond

Dundalk Institute of Technology, Dundalk, Co. Louth, Ireland

**O39 Predictors of Cognitive Reserve in Healthy Ageing**David Delany<sup>1</sup>, Lorraine Boran<sup>2</sup>, Sean McCarthy<sup>3</sup>, Angela Stewart<sup>3</sup><sup>1</sup>Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Dublin City University, Dublin, Ireland, <sup>3</sup>Waterford Institute of Technology, Waterford, Ireland**O40 Screening Cognitive Impairment in a Movement Disorder Clinic: Comparison of the Montreal Cognitive Assessment to the SMMSE**

Ronan O Caoimh, Mary J Foley, Steve Trawley, Niamh O Regan, Ciara McClade, Mary Hickey, D. William Molloy, Suzanne Timmons

Centre for Gerontology &amp; Rehabilitation, St. Finbarr's Hospital, Cork, Ireland

**O41 The Quick Mild Cognitive Impairment (Qmci) Screen: A New Screening Tool for Mild Cognitive Impairment**Ronan O Caoimh<sup>1</sup>, Yang Gao<sup>1</sup>, Ciara McGlade<sup>1</sup>, Liam Healy<sup>1</sup>, Paul Gallagher<sup>2</sup>, Suzanne Timmons<sup>1</sup>, D William Molloy<sup>1</sup><sup>1</sup>Centre for Gerontology & Rehabilitation, St. Finbarr's Hospital, Cork, Ireland, <sup>2</sup>Department of Geriatric Medicine, Cork University Hospital, Cork, Ireland**O42 Cognitive Impairment Increases Risk of Infection, Recurrence and Death Due to Hospital-onset C. Difficile**Alan Martin<sup>1</sup>, Katie Solomon<sup>3</sup>, Caoilfhionn O'Donoghue<sup>1</sup>, Margaret Hannan<sup>1</sup>, Lynda Fenelon<sup>2</sup>, Lorraine Kyne<sup>1</sup><sup>1</sup>Mater Misericordiae University Hospital, Dublin, Ireland, <sup>2</sup>St Vincent's University Hospital, Dublin, Ireland, <sup>3</sup>University College Dublin, Dublin, Ireland**O43 The Development of the Attitudes to Personal Ageing Scale: Measuring Attitudes to Self-Ageing**

Frances O'Donnell, Ann O'Hanlon, Moira Maguire

Dundalk Institute of Technology, Co. Louth, Ireland

**O44 The Influence of Clinical Governance Alternatives on Emergency Department Utilization and Mortality Rates in a Publicly Funded Elderly Residential Care Home (Nursing Home)**

Frances Pidgeon, Katriona Manning, Dermot Power

St. Mary's Hospital, Phoenix Park, Dublin 20, Ireland

**O45 Predicting the In-Patient Outcomes of Acute Medical Admissions from the Nursing Home**Roman Romero-Ortuno<sup>1</sup>, Diarmuid O'Shea<sup>2</sup>, Bernard Silke<sup>1</sup><sup>1</sup>Division of Internal Medicine, St James's Hospital, Dublin, Ireland, <sup>2</sup>Department of Medicine for the Elderly, St Vincent's University Hospital, Dublin, Ireland**O46 Nursing Home Residents in the Emergency Department: A Cohort Study**

Sean Kennelly, Robert Briggs, Desmond O'Neill

Tallaght Hospital, Dublin, Ireland

**O47 NH ACE (Nursing Home Acute Care Evaluation): A Targeted Intervention in Nursing Home Patients to Enhance Access to Appropriate Acute Care**

Siobhan M Kennelly, Josephine Soh, Lelane VanDer Poel, Caitriona Tiernan, Melissa Ryan, Eamon Dolan, PME McCormack

Department of Medicine for the Elderly, Connolly Hospital, Dublin, Ireland

**O48 Delirium in Older Hospital Inpatients: Incidence, Prevalence and Motor Subtyping**Niamh O'Regan<sup>1</sup>, Steve Trawley<sup>1</sup>, Will Molloy<sup>1</sup>, David Meagher<sup>2</sup>, Suzanne Timmons<sup>1</sup><sup>1</sup>Centre for Gerontology and Rehabilitation, University College Cork, Cork, Ireland, <sup>2</sup>University of Limerick Medical School, Limerick, Ireland

**O49 Knowledge, Skills, and Attitudes of Clinicians Towards the Assessment of Cognition in Older Patients in the Emergency Department**

Sean Kennelly, Deirdre Morley, Martin Rochford, Desmond O' Neill  
Tallaght Hospital, Dublin, Ireland

**O50 TUDA (The Trinity, University of Ulster and Department of Agriculture Study): RBANS Specificity in an Elderly Out-Patient Cohort**

Robert Coen<sup>1</sup>, Kevin McCarroll<sup>1</sup>, Miriam Casey<sup>1</sup>, Bernard Walsh<sup>1</sup>, Davis Coakley<sup>1</sup>, Brian Lawlor<sup>1</sup>, John Scott<sup>2</sup>, Anne Molloy<sup>2</sup>, Helene McNulty<sup>3</sup>, Mary Ward<sup>3</sup>, Sinead McNiffe<sup>1</sup>, Helen Toohey<sup>1</sup>, Conal Cunningham<sup>1</sup>

<sup>1</sup>Mercers Institute for Research on Ageing, St. James's Hospital, Dublin, Ireland, <sup>2</sup>Department of Biochemistry Trinity College Dublin, Dublin, Ireland, <sup>3</sup>Biomedical Sciences Research Institute, University of Ulster., Coleraine, Ireland

**O51 A Group Intervention to Reduce Burden and Symptoms of Depression in Informal Dementia Caregivers**

Mark Tyrrell

University College Cork, Cork, Ireland

## POSTERS

### **P1 A Review of the Workload of Providing a Psychiatry of Old Age Liaison Service to a Supra Regional Centre**

Anne Gallagher<sup>1</sup>, Mary Davoren<sup>2</sup>, Karena Meehan<sup>1</sup>

<sup>1</sup>Galway University Hospital, Galway, Ireland, <sup>2</sup>Central Mental Hospital, Dublin, Ireland

### **P2 An Intervention Study Exploring the Effects of Providing Older Adult Hip Fracture Patients with an Information Booklet in the Early Postoperative Period**

Siobhan Murphy<sup>1</sup>, Col Conway<sup>1</sup>, Niamh McGrath<sup>2</sup>, Breda O' Leary<sup>2</sup>, Mary p O' Sullivan<sup>2</sup>, Dawn O' Sullivan<sup>2</sup>

<sup>1</sup>University College Cork, Cork, Ireland, <sup>2</sup>Cork University Hospital, Cork, Ireland

### **P3 Self-neglect in Old Age: A Survey of Old Age Psychiatrists in Ireland**

James G. O'Brien, Colm Cooney, Mairead Bartley, Desmond O'Neill

University of Louisville, Louisville, Kentucky, USA

### **P4 The Activity of Daily Living Suite**

Joanne Cannon

Institute of Public Administration, Dublin, Ireland Royal Hospital Donnybrook

### **P5 Waiting for LTC Under General Medicine: Trends and Outcomes**

Roman Romero-Ortuno<sup>1</sup>, Carol Murphy<sup>2</sup>, JB Walsh<sup>2</sup>, Conal Cunningham<sup>2</sup>, Deirdre O'Riordan<sup>1</sup>, Bernard Silke<sup>1</sup>

<sup>1</sup>Division of Internal Medicine, St James's Hospital, Dublin, Ireland, <sup>2</sup>Medicine for the Elderly Department, St James's Hospital, Dublin, Ireland

### **P6 Animal-Assisted Intervention: Promoting Wellbeing in a Residential Care Unit for Older Persons**

Mary Doyle<sup>1</sup>, Desmond O'Neill<sup>2</sup>

<sup>1</sup>Peamount Healthcare, Dublin, Ireland, <sup>2</sup>Adelaide & Meath Hospital, Dublin, Ireland

### **P7 What's Another Year? Level 2 Palliative Care Provision Within a Continuing Care Setting: Staff Views and Perspectives**

Geraldine Tracey, Valerie O'Reilly

Our Lady's Hospice & Care Services, Dublin, Ireland

### **P8 Sustained Attention and Frailty in the Older Adult Population**

Aisling O'Halloran, Rose Anne Kenny

TILDA, Trinity College, Dublin, Ireland

### **P9 The Value of Brain Natriuretic Peptide (BNP) in Predicting the Result of Tilt Table Testing in Older Patients**

Graham Sutton<sup>1</sup>, Raja Hussain<sup>2</sup>

<sup>1</sup>St James University Hospital, Leeds, UK, <sup>2</sup>Pinderfields General Hospital, Wakefield, UK

### **P10 Post Stroke Shoulder Pain: Prevalence and Rates of Detection on an Acute Stroke Service**

Kirstyn P James, Mohd Fadhli Karim, Subhasish Sengupta

Our Lady of Lourdes Hospital, Drogheda, Ireland

### **P11 Prevention of Post Stroke Shoulder Pain on an Acute Stroke Service**

Kirstyn P James, Mohd Fadhli Karim, Subhasish Sengupta

Our Lady of Lourdes Hospital, Drogheda, Ireland

### **P12 Use of Patient Identification Wristbands in an Irish Emergency Department**

Kirstyn P James, Jennifer Yates, Dervla Connaughton, Subhasish Sengupta

Our Lady of Lourdes Hospital, Drogheda, Ireland

### **P13 Occlusion of the Artery of Percheron: A Case of Bilateral Thalamic Stroke**

Kirstyn P James, Orla Sheehan, Stuart KK Lee, Ciaran F Donegan

Beaumont Hospital, Dublin, Ireland

### **P14 'Pregnancy' in the Acute Geriatric Unit**

Helen O' Brien, Shaun T O' Keeffe

Merlin Park Hospital & University College Hospital Galway, Galway, Ireland

### **P15 An Evaluation of Client Satisfaction Following a Period of Rehabilitation in the Community Reablement Unit**

Emily Adamson<sup>1</sup>, Tara Cusack<sup>2</sup>, Miriam Casey<sup>3</sup>, Catherine Blake<sup>2</sup>

<sup>1</sup>Our Lady's Hospice, Dublin, Ireland, <sup>2</sup>University College Dublin, Dublin, Ireland, <sup>3</sup>St. James's Hospital, Dublin, Ireland

### **P16 Polypharmacy and Agents Increasing Falls Risk: An Audit of Prescribing Practice Among Patients in Interim Care**

N Hannon, EC Callaly, C Dowling, S McBride, S Saquib, M Day, D Power, CW Fan

Syngé Unit & Department of Medicine for Older Persons, Mater Misericordiae University Hospital, Dublin, Ireland

### **P17 Inpatient Mortality in an Acute Medicine for the Elderly Service: A Retrospective Analysis**

Sinead Evans, Diarmuid O'Shea, Kit Mun Tan, Graham Hughes, Morgan Crowe, Clodagh O'Dwyer

Department of Medicine for the Elderly, St. Vincent's University Hospital, Elm Park, Dublin, Ireland

**P18 Can the Assessment of Motor and Process Skills (AMPS) Be Used as a Predictor of Overall Safety in Community Dwelling Older People Admitted to a Rehabilitation Unit Within an Acute Hospital**

Fiona Tobin<sup>2</sup>, Joan Brangan<sup>1</sup>

<sup>1</sup>Trinity College, Dublin, Ireland, <sup>2</sup>Tallghat Hospital, Dublin, Ireland

**P19 Staying Steady: Inter-agency Partnership Initiative for Falls Prevention**

Elizabeth Griffin<sup>1</sup>, Bernadette Rooney<sup>2</sup>, Chei Wei Fan<sup>3</sup>, Marian Glynn<sup>1</sup>, Laura Jane McGinley<sup>4</sup>, Andrew Murphy<sup>5</sup>

<sup>1</sup>Physiotherapy Department, St. Mary's Hospital, Dublin, Ireland, <sup>2</sup>Health Promotion Service, Health Service Executive, Dublin North East, Ireland, <sup>3</sup>Consultant Geriatrician, St. Mary's Hospital, Dublin, Ireland, <sup>4</sup>Sport and Recreation Service, Dublin City Council, Dublin, Ireland, <sup>5</sup>Physiotherapy Department, Health Service Executive, Dublin North West, Ireland

**P20 Lost for Words: Right Place, Right Time! Endovascular Treatment of Stroke: A Case Report**

Carmel Curran, Paul Mullane, Gerard Wyse, Noel Fanning, Paul Gallagher

Cork University Hospital, Cork, Ireland

**P21 Timing of Investigations in Acute Stroke Patients: An Audit**

Mary-Louise Gargan, Haswadi Hassan, James Mahon, Olivia Mahon

Trinity College Dublin, Dublin, Ireland

**P22 Are Older Persons on Warfarin Adequately Anticoagulated? An Audit of a Dedicated Warfarin Clinic for Older Persons**

Avril Travers, Niamh Hannon, Elizabeth Callaly, Derek Hayden, Joseph Duggan, Lorraine Kyne, Chie Wei Fan

Department of Medicine for the Older Person, Mater Misericordiae University Hospital, Dublin, Ireland

**P23 Bones Beyond 70: Characteristics of Elderly Patients Referred to a Bone Health Clinic**

Mohamed Ahmed, Ebtihal Babiker, Bridie Rooney, Berni McGowan, John Doherty

Sligo General Hospital, Sligo, Ireland

**P24 Total Body DXA Scanning in a Study of Sarcopenia, Disability and Fracture Risk in a Cohort of Inflammatory Arthritis Patients Attending a Rheumatology Unit**

Mohamed Ahmed<sup>1</sup>, Sharon Cowley<sup>1</sup>, Mohammed Hussein<sup>2</sup>, John Doherty<sup>1</sup>, Carmel Silke<sup>2</sup>, Brian Whelan<sup>2</sup>

<sup>1</sup>Sligo General Hospital, Sligo, Ireland, <sup>2</sup>Rheumatology Unit, Manorhamilton, Sligo, Ireland

**P25 Assessing Fracture Risk in Patients Who Fall: A Comparison of FRAX<sup>®</sup> and NICE Guidelines**

Laura Cook, Graham Sutton

St James' University Hospital, Leeds, Yorkshire, UK

**P26 Fear of Falling in an Older Irish Population: Prevalence and Psychosocial Predictors**

Hilary Cronin, Claire O'Regan, George Savva, Orna Donoghue, Patricia Kearney, Rose Anne Kenny

Trinity College Dublin, Dublin, Ireland

**P27 Older Patients Awareness of Stroke: The Impact of the "Act F.A.S.T." Stroke Campaign**

Niamh Peters<sup>1</sup>, Mike O'Connor<sup>2</sup>

<sup>1</sup>University College Cork, Cork, Ireland, <sup>2</sup>Cork University Hospital, Cork, Ireland

**P28 The Effect of Tooth Replacement Strategies on the Nutritional Status of Older Patients**

Gerry McKenna, Finbarr Allen, Denis O'Mahony, Albert Flynn, Michael Cronin, Noel Woods

University College Cork, Cork, Ireland

**P29 Audit of a Multidisciplinary Falls Risk Assessment Clinic in an Irish General Hospital: A Retrospective Analysis**

Navya Basavaraju, Emma Groarke, Emer Ahern, Paul Cotter, Rory McGovern

St. Luke's General Hospital, Kilkenny, Ireland

**P30 Facilitators and Barriers for Implementation of the Irish National Stroke Guidelines**

Claire Donnellan<sup>1</sup>, Susannah Sweetman<sup>1</sup>, Emer Shelley<sup>2</sup>

<sup>1</sup>Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Royal College of Surgeons in Ireland, Dublin, Ireland

**P31 Surveillance of 24 Hour Urinary Calcium in Patients Commencing Recombinant PTH (1–34) Therapy**

Elizabeth McCarron, Rosaleen Lannon, Miriam Casey

Bone Health Clinic, Mercer's Institute for Research on Ageing, St James's Hospital, Dublin 8, Ireland

**P32 Internet Based Reminiscence Therapy (RT) for People with Cognitive Impairment: Does It Improve Mood, Cognition, Quality of Life (QoL), Engagement and Communication? A Pilot Study**

Klara Anderson<sup>1</sup>, Aisling Egan<sup>2</sup>, Roisin O'Grady<sup>2</sup>, Julia O'Rourke<sup>3</sup>, Ronan Collins<sup>3</sup>

<sup>1</sup>Peamount Healthcare, Dublin, Ireland, <sup>2</sup>Trinity College, Dublin, Ireland, <sup>3</sup>Tallaght Hospital, Dublin, Ireland

**P33 Stroke Mimics: Beware of Endocarditis!**

Usman Khan, Marie O'Connor, Michael O'Connor

Department of Geriatric Medicine, Cork University Hospital, Cork, Ireland

**P34 Health and Disease Incidence in Irish, Elderly Community-Dwelling Subjects: Baseline Findings From The ELDERMET Project**

Eibhlís M O'Connor, Paul W O'Toole

University College Cork, Cork, Ireland



**P35 The Effect of Time and Nasogastric Feeding on the Prevalence of Gastric Ulceration Prior to PEG Placement in Dysphagic Stroke Patients**

Anna Brown<sup>1</sup>, Finbar McCarthy<sup>2</sup>, PWN Keeling<sup>2</sup>, Joseph Harbison<sup>1</sup>

<sup>1</sup>Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Department of Gastroenterology, St James's Hospital, Dublin, Ireland

**P36 Potential Benefit of Implementing a Higher Dose Statin Regimen in Subjects Stroke and TIA: How 'SPARCLY' are Our Patients?**

Zarheen Allam, Joseph

Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland

**P37 Multidisciplinary Team Meetings in a Residential Care Setting for Older People**

Alison O'Brien<sup>1</sup>, Catherine Sweeney<sup>2</sup>

<sup>1</sup>University College Cork, Cork, Ireland, <sup>2</sup>St Patrick's University Hospital/Marymount University Hospice, Cork, Ireland

**P38 Mitochondrial Cytopathy Rehabilitation: A Single Case Study**

Sarah O'Callaghan, Miriam McDonnell, Sinead Coleman

St. James's Hospital, Dublin, Ireland

**P39 Executive Dysfunction is Independently Associated with Balance Post-stroke**

Sara Hayes, Claire Donnellan, Emma Stokes

Trinity College Dublin, Dublin, Ireland

**P40 Long-Term Care in Dublin City and County: Does Service Provision Match Mapped Need?**

David Robinson<sup>1</sup>, Michael Arrigan<sup>2</sup>, Maria Gaughan<sup>1</sup>, Jennifer Feighan<sup>1</sup>, Gerard Boyle<sup>1</sup>, Jan Rigby<sup>2</sup>, Rose Anne Kenny<sup>1</sup>

<sup>1</sup>Department of Medical Gerontology, St James's Hospital and Trinity College, Dublin, Ireland, <sup>2</sup>Centre for Health Geoinformatics, National University of Ireland, Maynooth, Ireland

**P41 App Deployment of NIHSS (National Institutes of Health Stroke Scale) is Faster than Paper Format in Clinical Practice**

Catherine Peters, Cathy O' Callaghan, Susie O' Callaghan, Shane O' Hanlon, Grainne O' Malley, Margaret O' Connor, Declan Lyons

University Hospital Limerick, Limerick, Ireland

**P42 Stroke Thrombolysis in a Large Teaching Hospital: A Retrospective Review**

Catherine Peters, Margaret O'Connor, Peter Boers, Declan Lyons

University Hospital Limerick, Limerick, Ireland

**P43 Promoting Teamwork in an Acute Rehabilitation Setting Through Multi-Disciplinary Team Rehabilitation Consultations**

Elaine O Connor, Catriona Moran, Jaspreet Bhangu, Sinead Coleman, Fiona Connaughton, Conal Cunningham

St. James's Hospital, Dublin, Ireland

**P44 Age-Related White Matter Disease and an Incomplete Circle of Willis**

Daniel Ryan, Susan Byrne, Ruth Dunne, Mark Harmon, Joseph Harbison

St. James's Hospital, Dublin, Ireland

**P45 Mobility Norms for Community Dwelling, Older Irish Adults: Gait Speed and Timed Up-and-Go**

Orna Donoghue, George Savva, Hilary Cronin, Rose Anne Kenny

The Irish Longitudinal Study on Ageing (TILDA), Trinity College Dublin, Dublin, Ireland

**P46 Geriatricians in the Acute Medicine Unit in a University Hospital**

Ontefetse Ntlholang, Therese Carey, Jonathon O'Keeffe, Morgan Crowe, Diarmuid O'Shea, Graham Hughes, Kit Mun Tan

Department of Medicine for the Elderly, St. Vincent's University Hospital, Dublin, Ireland

**P47 What Happens to Patients Awaiting Nursing Home Care in an Acute Hospital? Status: Pending**

Kit Mun Tan, Graham Hughes, Diarmuid O'Shea

Department of Medicine for the Elderly, St. Vincent's University Hospital, Dublin, Ireland

**P48 Outcome of Patients Seen on General Geriatric Medicine Consultation in a University Hospital**

Kit Mun Tan, Graham Hughes, Diarmuid O'Shea

Department of Medicine for the Elderly, St. Vincent's University Hospital, Dublin, Ireland

**P49 The Prevalence of Chronic Kidney Disease in a Cohort of Patients Over 65 Years with Normal Serum Creatinine**

Ishwarya Balasubramanian, Catherine Peters, Margaret O'Connor, Declan Lyons

Mid Western Regional Hospital, Limerick, Ireland

**P50 Medical Insurance Status and Thrombolysis for Stroke**

Jaspreet Banghu, Mawish Naureen, Joseph Harbison, Karl Boyle

Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland

**P51 The Obese and the Underweight Community-Dwelling Older Person in a Rehabilitation Setting: A Comparative Case Study**

Sheela Perumal, Denis Donohoe, George Robles, Catriona de Robeck, Cecelia O'Malley, Michael Maher, Emer Sheridan, Geraldine Connolly,

Mary Weakliam, Emily Adamson, Carla Weir, Eilis Hennessy, Avril Halligan, Aine Flynn, Eimear O'Dwyer

Our Lady's Hospice & Care Services, Dublin, Ireland

**P52 Post-Processing Techniques for MR Perfusion and MR Angiography that Confirm the Presence of Borderzone Infarction**Daniel Ryan<sup>1</sup>, Soren Christensen<sup>2</sup>, James Meaney<sup>1</sup>, Andrew Fagan<sup>1</sup>, Roseanne Kenny<sup>1</sup>, Joseph Harbison<sup>1</sup><sup>1</sup>St. James's Hospital, Dublin, Ireland, <sup>2</sup>Brain Imaging Laboratory, Melbourne, Australia**P53 Nursing-Led Swallow Screening in Acute Stroke Unit**

Maeve Brennan, Riona Mulcahy, Una O'Brien, Susan Cliffe, Maeve

Waterford Regional Hospital, Waterford, Ireland

**P54 An Interdisciplinary Cross Site Stroke Service in County Louth: An Overview of the First Year**

Shay Englishby, Iara Faria, Olwyn Lynch, Patrick Mc Eneaney, Karen O'Sullivan, Aileen Rafferty, Nuala Rafferty, Emma Scully, Mansour Smew, Emma Walker

Stroke Cross Site Interdisciplinary Team, Our Lady of Lourdes Hospital and Stroke Rehab Unit, Louth County Hospital, HSE: DNE, County Louth, Ireland

**P55 Transforming Our Practice: Neuro-Developmental Treatment Approach Following Stroke**Sinead Duddy<sup>1</sup>, Sarah Ronayne<sup>1</sup>, Sheila Sheridan<sup>2</sup>, Olivia Tierney<sup>2</sup><sup>1</sup>Mayo General Hospital, Castlebar, Mayo, Ireland, <sup>2</sup>Sacred Heart Hospital, Castlebar, Mayo, Ireland**P56 High Sensitivity Troponin T Results in a Group of Older Patients**

Catherine Oliver, Eoin Hunt, Declan Lyons, Margaret O'Connor

Limerick University Hospital, Limerick, Ireland

**P57 Assessment of Visual Acuity in Older Adults on an Orthopaedic Unit**Sheila Roche<sup>1</sup>, Kieran O'Connor<sup>2</sup>, Mary Warren<sup>3</sup>, Laura Vogtle<sup>3</sup><sup>1</sup>South Infirmary-Victoria University Hospital, Cork, Ireland, <sup>2</sup>Mercy University Hospital, Cork, Ireland, <sup>3</sup>University of Alabama at Birmingham, Birmingham, AL, USA**P58 Strontium Ranelate in Male Osteoporosis**

Rosaleen Lannon, Lorraine O'Keeffe, Neasa Fallon, MC Casey, JB Walsh

Bone Health Service, Mercers Institute for Research on Ageing, St James's Hospital, Dublin, Ireland

**P59 Neoliberalism, Misrecognition, Maldistribution and Health Inequalities in Ireland: Rendering the Older Person Invisible**

Angela Flynn

University College Cork, Cork, Ireland

**P60 Recombinant Tissue Plasminogen Activator for Acute Ischaemic Stroke in a Regional General Hospital 2008–2011**

Breffni Drumm, Wael Hussein, Sean Murphy, Clare Fallon

Mullingar Regional Hospital, Westmeath, Ireland

**P61 Hip Fracture and Bone Health 2010: An Audit of Assessment, Treatment and Follow-Up in a South Dublin Inner City Teaching Hospital**Elizabeth Dunbar<sup>1</sup>, Rosaleen Lannon<sup>2</sup>, Joseph Browne<sup>2</sup>, Niamh Maher<sup>2</sup>, Eilish Thornton<sup>2</sup>, MC Casey<sup>2</sup>, JB Walsh<sup>2</sup><sup>1</sup>Graduate Entry Medical School, University of Limerick, Limerick, Ireland, <sup>2</sup>Bone Health Service, Mercers Institute for Research in Ageing, St James's Hospital, Dublin, Ireland**P62 Audit of the Use of Low Molecular Weight Heparin Amongst Newly Admitted Inpatients At a Tertiary Referral Centre**

Conall Fitzgerald, Magdi Mohamed, Victoria Robinson, Jawaid Azam, James Mahon, David Robinson, Miriam Casey, Rose Anne Kenny, Davis

Coakley, J Bernard Walsh, Conal Cunningham

St James's Hospital, Dublin, Ireland

**P63 Cognitive Outcomes of Metabolically Healthy Obese (MHO) Older Persons**Cormac Kennedy<sup>1</sup>, Roman Romero-Ortuno<sup>2</sup>, David Robinson<sup>2</sup>, Diarmuid O'Shea<sup>1</sup>, Donal O'Shea<sup>1</sup>, Rose Anne Kenny<sup>2</sup>, Jean O'Connell<sup>1</sup><sup>1</sup>St Vincent's University Hospital and University College Dublin, Dublin, Ireland, <sup>2</sup>St James's Hospital and Trinity College Dublin, Dublin, Ireland**P64 The Role of Geriatric Medicine in the Emergency Department**

Avril Beirne, Therese Carey, Jonathon O'Keeffe, Morgan Crowe, Diarmuid O'Shea, Kit Mun Tan, Graham Hughes

St Vincent's University Hospital, Dublin, Ireland

**P65 Denosumab: Identification and Tolerability in an Irish Bone Health Clinic Population**

Rosaleen Lannon, Victoria Robinson, Conal Fitzgerald, Kara Fitzgerald, MC Casey, JB Walsh

Bone Health Service, Mercers Institute for Research on Ageing, St James's Hospital, Dublin, Ireland

**P66 Screening for Poor Outcomes in Hospitalised Older People: The VIP Score (Variable Indicative of Placement Risk) as Predictor of Length of Stay in Hospitalised Older Patients**

G Mohamed, S Ahmed, J Clarke, K Kim, J Enklemann, R Mc Govern, E Ahern, PE Cotter

St Luke's Hospital, Kilkenny, Ireland

**P67 Are We Ageist When It Comes to Interventional Stroke Studies?**

Adriana Hadbavna, Tara Coughlan, Ronan Collins, Des O'Neill

AMNCH, Tallaght, Dublin, Ireland



**P68 Timed Up-and-Go Test on Admission and Pre-Discharge for an Intermediate Care Unit**

Elizabeth Callaly, Niamh Hannon, Ciara Dowling, S McBride, M Day, Dermot Power, Chie Wei Fan  
Mater Misericordiae University Hospital, Dublin, Ireland

**P69 An Inpatient Study of the Prevalence of Having a Will and Understanding of Power of Attorney**

Anne Marie Liddy, Joanne Kitchen, Shilpa Purushotham, Riona Mulcahy  
Waterford Regional Hospital, Waterford, Ireland

**P70 FDG-PET Imaging in a Memory Clinic: A Useful Diagnostic Tool?**

Kevin McCarroll<sup>1</sup>, Eileen Sweeney<sup>1</sup>, Thomas Monaghan<sup>1</sup>, Robert Coen<sup>1</sup>, Niall Sheehy<sup>2</sup>, Conal Cunningham<sup>3</sup>, JB Walsh<sup>3</sup>, Brian Lawlor<sup>1</sup>  
<sup>1</sup>Mercer's Institute for Research on Ageing, Dublin, Ireland, <sup>2</sup>Department of Radiology, St. James's Hospital, Dublin, Ireland, <sup>3</sup>Department of Gerontology, St. James's Hospital, Dublin, Ireland

**P71 Carotid Stenosis in the Oldest Old**

Karl Boyle<sup>1</sup>, Brendan Browne<sup>2</sup>, Mary-Paula Colgan<sup>1</sup>, Xenia Martin<sup>1</sup>, Sean O'Neill<sup>1</sup>, Prakesh Madhavan<sup>1</sup>, Dermot Moore<sup>1</sup>, Joseph Harbison<sup>2</sup>  
<sup>1</sup>St James's Hospital, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland

**P72 Dementia: The Experiences of an Acute Medical Service**

Mairead Bartley, Michael Barry  
Department of Pharmacology and Therapeutics, St. James's Hospital, Dublin, Ireland

**P73 Vertebroplasty: A Case Series in a Specialised Bone Health Service**

Niamh Adams<sup>1</sup>, Jaspreet Bhangu<sup>1</sup>, Rosaleen Lannon<sup>1</sup>, Daniel O'Hare<sup>1</sup>, Kara Fitzgerald<sup>1</sup>, Miriam C Casey<sup>1</sup>, Eilish Thornton<sup>2</sup>, Niall McEniff<sup>2</sup>, J Bernard Walsh<sup>1</sup>  
<sup>1</sup>Bone Health Service, Mercer's Institute for Research on Ageing, St James's Hospital, Dublin, Ireland, <sup>2</sup>Department of Radiology, St. James's Hospital, Dublin, Ireland

**P74 Prescribing of Night Sedation on Discharge Among Elderly Patients**

Maria Smyth, James Mahon, Bridget Kiely, Sarah O'Brien, Diarmuid O'Keefe, JB Walsh  
St James's Hospital, Dublin, Ireland

**P75 Atypical Femoral Fractures: A Case Series in a Specialised Bone Health Service**

Niamh Adams, Jaspreet Bhangu, Daniel O'Hare, Georgina Steen, Rosaleen Lannon, Miriam C Casey, J Bernard Walsh  
Bone Health Service, Mercer's Institute for Research on Ageing, St James's Hospital, Dublin, Ireland

**P76 Audit of Electronic Discharge Summaries in a Medicine for the Elderly Department**

Maria Smyth, James Mahon, Sarah O'Brien, Diarmuid O'Keefe, JB Walsh  
St James's Hospital, Dublin, Ireland

**P77 Persistence and Dose Escalation of Anti-Dementia Medications**

Linda Brewer<sup>1</sup>, Kathleen Bennett<sup>2</sup>, David Williams<sup>1</sup>  
<sup>1</sup>Department of Stroke and Geriatric Medicine, Royal College of Surgeons of Ireland, Dublin, Ireland, <sup>2</sup>Department of Pharmacology and Therapeutics, Trinity Centre for Health Sciences, Dublin, Ireland

**P78 Instrumental Activities of Daily Living and Their Relationship to Diet and Vitamin Levels: The Dublin Healthy Ageing Study**

David Robinson, Ai-Vryn Chin, Henry O'Connell, Fiona Hamilton, Irene Bruce, Robert Coen, John Scott, Anne Molloy, Brian Lawlor, Conal Cunningham  
Mercer's Institute for Research on Ageing, St James's Hospital, Dublin, Ireland

**P79 Vitamin D and Falls: Exploring the Relationship in Older Adults**

Kevin McCarroll<sup>1</sup>, Miriam Casey<sup>2</sup>, JB Walsh<sup>2</sup>, John Scott<sup>3</sup>, Anne Molloy<sup>3</sup>, Martin Healy<sup>4</sup>, Helene McNulty<sup>5</sup>, JJ Strain<sup>5</sup>, Conal Cunningham<sup>2</sup>  
<sup>1</sup>Mercer's Institute for Research on Ageing, Dublin, Ireland, <sup>2</sup>Department of Gerontology, St. James's Hospital, Dublin, Ireland, <sup>3</sup>Department of Biochemistry, Trinity College, Dublin, Ireland, <sup>4</sup>Department of Biochemistry, St. James's Hospital, Dublin, Ireland, <sup>5</sup>Biomedical Sciences Research Institute, University of Ulster, Coleraine, Ireland

**P80 Vascular Risk Factors and Functional Impairment in Community Dwelling Older Adults in the West of Ireland**

Michelle Canavan<sup>1</sup>, Andrew Smyth<sup>2</sup>, Emer McGrath<sup>2</sup>, Liam Glynn<sup>2</sup>, Andrew Murphy<sup>2</sup>, Eamon Mulkerrin<sup>1</sup>, Martin O'Donnell<sup>1</sup>  
<sup>1</sup>Univeristy Hospital Galway, Galway, Ireland, <sup>2</sup>National University of Ireland, Galway, Ireland

**P81 Closing the Audit Loop: Stroke Care in a University Hospital Three Years On**

Michelle Canavan<sup>1</sup>, Andrew Smyth<sup>2</sup>, Patricia Guilfoyle<sup>1</sup>, Helen O'Brien<sup>1</sup>, Amjad Khan<sup>1</sup>, Bernadette McGuinness<sup>1</sup>, Shaun O'Keefe<sup>1</sup>, Martin O'Donnell<sup>1</sup>, Thomas Walsh<sup>1</sup>, Eamon Mulkerrin<sup>1</sup>  
<sup>1</sup>University Hospital Galway, Galway, Ireland, <sup>2</sup>National University of Ireland, Galway, Ireland

**P82 Rapidly Progressive Dementia: A Case Report**

Aimy Abdullah, Paul McElwain, Josie Clare  
Waterford Regional Hospital, Waterford, Ireland

**P83 A Stroke Communication Tool for the iPad: Experiences of User-Centered Design in the Clinical Environment**

Christopher Soraghan, Laura Coleman, Tim Foran, Katie Walsh, Emer Foley, Claire Collins, Fran Hegarty, Gerard Boyle  
St James's Hospital, Dublin, Ireland

**P84 Polypharmacy and Inappropriate Prescribing: How Well are We Doing?**

Aimy Abdullah, Riona Mulcahy, Josie Clare  
Waterford Regional Hospital, Waterford, Ireland

**P85 An Exploration of Community Presence for Older People with an Intellectual Disability.**

Mary McCarron, Darren McCausland, Eilish Burke, Janet Swinburne, Rachael Carroll, Philip McCallion  
Trinity College Dublin, Dublin, Ireland

**P86 Errors While Rewriting Drug Prescription Records on a “Long Stay” Ward**

Kirstyn P James, Subhasish Sengupta  
Our Lady of Lourdes Hospital, Drogheda, Ireland

**P87 The Impact in Ireland of Caring for an Ageing Family Member with an Intellectual Disability**

Mary McCarron, Marriane Griffiths, Eilish Burke, Janet Swinburne, Rachael Carroll, Philip McCallion  
Trinity College Dublin, Dublin, Ireland

**P88 Stroke Thrombolysis: Correlation Between Radiological Assessments and Clinical Outcomes**

Terence Farrell<sup>1</sup>, Kieran Carroll<sup>2</sup>, Rory McGovern<sup>1</sup>  
<sup>1</sup>Stroke Service, St Luke’s General Hospital Kilkenny, Kilkenny, Ireland, <sup>2</sup>Department of Radiology, St Luke’s General Hospital Kilkenny, Kilkenny, Ireland

**P89 A Study of PTH Response to Hypo-vitaminosis D in a Specialist Bone Health Clinic**

Rosaleen Lannon, Najia Siddique, Georgina Steen, MC Casey, JB Walsh  
Bone Health Service, Mercers Institute for Research on Ageing, St James’s Hospital, Dublin, Ireland

**P90 IV Bisphosphonates in Osteoporosis: Is Full Dose of Zoledronic Acid Really Necessary?**

Najia Siddique<sup>1</sup>, Daniel OHare<sup>1</sup>, Aoife Quinn<sup>1</sup>, Cathal Walsh<sup>2</sup>, Tracy Byrne<sup>1</sup>, MC Casey<sup>1</sup>, JB Walsh<sup>1</sup>  
<sup>1</sup>Bone health services, Mercers Institute for Research on Ageing at St. James’s Hospital, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland

**P91 Does Inattention Predict Cognition in an Older Out-Patient Population?**

Paul McElwaine<sup>2</sup>, Niamh O’Regan<sup>3</sup>, Aimy Abdullah<sup>1</sup>, Yang Gao<sup>3</sup>, Josie Clare<sup>1</sup>, Suzanne Timmons<sup>4</sup>  
<sup>1</sup>Waterford Regional Hospital, Waterford, Ireland, <sup>2</sup>Cork University Hospital, Cork, Ireland, <sup>3</sup>University College Cork, Cork, Ireland, <sup>4</sup>South Infirmary Victoria Hospital/St. Finbarr’s Hospital, Cork, Ireland

**P92 Dem@Care: A Proposed System for the Home-Based Ambient Monitoring and Enablement of Older Adults with Dementia**

Joanna Edel McHugh, Eamonn Newman, Alan Smeaton, Kate Irving  
Dublin City University, Dublin, Ireland

**P93 Compliance with Stroke Guidelines in a New Stroke Unit**

Nathan Maher, Waheed Shah, Joanne Kitchen, Riona Mulcahy  
Waterford Regional Hospital, Waterford, Ireland

**P94 I Don’t Mind Older People, I Just Don’t Want To Be Old: Attitudes Towards Age and Ageing**

Maria Heffernan, Andy Cochrane  
National University of Ireland Maynooth, Co Kildare, Ireland

**P95 Responding to an Ageing Population: A Bibliometric Analysis**

Andy Cochrane, Amanda Roberts  
National University of Ireland Maynooth, Co Kildare, Ireland

**P96 Test Retest and Inter-rater Reliability of Fear of Falling in Older Adults with Intellectual Disabilities Using Proxies**

Sinéad Foran<sup>1</sup>, Mary McCarron<sup>2</sup>, Philip McCallion<sup>3</sup>  
<sup>1</sup>Waterford Institute of Technology, Waterford, Ireland, <sup>2</sup>Trinity College, Dublin, Dublin, Ireland, <sup>3</sup>University of Albany, upstate New York, USA

**P97 Care Needs Assessment of NHSS Applications from People Living in the Community**

Emer Ahern, Paul Cotter, Rory McGovern  
St Luke’s General Hospital, Kilkenny, Ireland

**P98 Decompressive Hemicraniectomy in a 67 Year Old Gentleman with Malignant Hemispheric Infarction**

AH Lavan<sup>1</sup>, SKK Lee<sup>1</sup>, I Khadijuh<sup>1</sup>, P Brennan<sup>2</sup>, M Javanpur<sup>3</sup>, DJP Williams<sup>1</sup>, A Moore<sup>1</sup>  
<sup>1</sup>Department of Geriatric and Stroke Medicine, Beaumont Hospital, Dublin, Ireland, <sup>2</sup>Department of Radiology, Beaumont Hospital, Dublin, Ireland, <sup>3</sup>Department of Neurosurgery, Beaumont Hospital, Dublin, Ireland, <sup>4</sup>Royal College of Surgeons in Ireland, Dublin, Ireland

**P99 The Effects of a Pilot Exercise Programme on Walking Capacity, Function and Quality of Life in People With Parkinson’s Disease**

Liz O’Sullivan  
Cork University Hospital, Cork, Ireland

**P100 A Multidisciplinary Community Rehabilitation Team in North Cork: An Overview of the First Two Years**

Isibéal McCoy, Mary Henderson, Pauline McSweeney, Louise McKenna, Ann McCarthy, Bernie Quinn  
HSE South, North Cork, Ireland

**P101 Poor Performance of a Readmission Risk Prediction Model in an Older UK Population: An Observational Study**Paul Cotter<sup>1</sup>, Vikas Bhalla<sup>2</sup>, Stephen Wallis<sup>2</sup>, Richard Biram<sup>2</sup><sup>1</sup>St Lukes Hospital, Kilkenny, Ireland, <sup>2</sup>Addenbrookes Hospital, Cambridge, UK**P102 One Year Audit of Prevalence and Management of Atrial Fibrillation in a Stroke Population**

Andrew Crowe, Imelda Noone, Ian Callanan, Diarmuid O'Shea

St. Vincent's University Hospital, Dublin, Ireland

**P103 Hypercalciuria as an Overt Cause of Renal Stones and Covert Cause of Osteoporosis**

Najia Siddique, Susan Mcanallen, James Sweeney, Georgina Steen, JB Walsh, MC Casey

Bone Health Services, Mercers Institute for Research on Ageing, St. James's Hospital, Dublin, Ireland

**P104 High Prevalence of Cerebral Amyloid Angiopathy (CAA) at Post-mortem Examination in Elderly Stroke Service Patients**

Morgan Crowe, Imelda Noone, Diarmuid O'Shea, Michael Farrell

St. Vincent's University Hospital, Dublin, Ireland

**P105 A New Look at the Socio-economic Health Gradient: Objective and Subjective Measures of Cardiovascular Health**

Irene Mosca, Bláithín Ní Bhuachalla, Rose-Anne Kenny

TILDA, Trinity College Dublin, Dublin, Ireland

**P106 Quality of Life (QOL) Post Stroke: A Case Series**

Zareena Abidin, Niamh Dixon, Frances McCarthy, Renata Katz, Dermot Power

St Mary's Hospital, Phoenix Park, Dublin, Ireland

**P107 Physiotherapy in Dermatomyositis: A Single-Case Study**

Miriam McDonnell

St. James's Hospital, Dublin, Dublin 8, Ireland

**P108 Self-Rated Vision and Cognitive Function in the Irish Population**Annalisa Setti<sup>1</sup>, Bláithín Ní Bhuachalla<sup>2</sup>, George M. Savva<sup>1</sup>, Rose Anne Kenny<sup>1</sup><sup>1</sup>The Irish Longitudinal Study on Ageing (TILDA), Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland**P109 Pilot of Integrated Care Pathway (ICP) for Hip Fracture in a Regional Hospital**

Louise Brent

University College Cork, Cork, Ireland

**P110 A Review of the Outcome of Thrombolysis for Acute Ischaemic Stroke in a University Hospital**

Imelda Noone, Serena Hatton, Ontefetse Nthlholang, Avril Beirne, Kit Mun Tan Tan, Roman Romero-Ortuno, Graham Hughes, Rachael Doyle, Diarmuid O'Shea, Morgan Crowe

St. Vincent's University Hospital, Dublin, Ireland

**P111 Orthostatic Hypotension and Frailty: The Irish Longitudinal Study on Ageing**

Matthew O'Connell, George Savva, Hilary Cronin, Chie Wei Fan, Rose Anne Kenny

Trinity College Dublin, Dublin, Ireland

**P112 Cognitive Ageing, Geriatrics Textbooks and Unintentional Ageism**

Stephanie Robinson, Robert Briggs, Desmond O'Neill

Centre for Ageing, Neuroscience and the Humanities, Trinity College, Dublin, Ireland

**P113 IV Zoledronic Acid: Indications for Its Administration and Its Tolerability Following First Dose**

Niamh Maher, Aoife Qinn, Georgina Steen, Nessa Fallon, Kara Fitzgerald, Joseph Browne, Miriam Casey, JB Walsh

St James's Hospital, Dublin, Ireland

**P114 Co-Morbidity and Rehabilitation**L van der Poel<sup>1</sup>, J O'Kelly<sup>2</sup>, E Dolan<sup>1</sup>, PME McCormack<sup>1</sup><sup>1</sup>Connolly Hospital, Dublin, Ireland, <sup>2</sup>Royal College of Surgeons, Dublin, Ireland**P115 The Smoking Elders in a General Hospital**

Afolabi Antonio, Aimi Abdullah, Cha Len Lee, Kaz Siddique

Waterford Regional Hospital, Waterford, Ireland

**P116 Referrals to Day Hospital: A Retrospective Review**

Sarah Cosgrave, Kathleen Fagan, Kathleen Kelly, Bernadette Murphy, Margaret Cagney, Dawn Kelly, Louise O' Callaghan, Diarmuid O' Shea

St. Vincent's University Hospital, Dublin, Ireland

**P117 An Audit on Intravenous Canulation in a Regional Hospital Setting**

Afolabi Antonio, Temilola Ajala, Hafsa Sazali

Waterford Regional Hospital, Waterford, Ireland

**P118 The Effect of Multiple Chronic Conditions on Self-Rated Health, Disability and Quality of Life Among the Older Populations of Northern Ireland and the Republic of Ireland**

Mark Hanly<sup>1</sup>, Olga McDaid<sup>1</sup>, Kathryn Richardson<sup>1</sup>, Frank Kee<sup>2</sup>, Rose Anne Kenny<sup>1</sup>, George Savva<sup>1</sup>

<sup>1</sup>Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Queens University Belfast, Belfast, UK

**P119 Change of Ambulatory Blood Pressure in a Primary Care Setting**

Lelane van der poel<sup>1</sup>, E Dolan<sup>1</sup>, J Duggan<sup>2</sup>

<sup>1</sup>Connolly Hospital, Dublin, Ireland, <sup>2</sup>Mater Misericordiae University Hospital, Dublin, Ireland

**P120 Prescription of Central Nervous System Agents in an Elderly Hospital Population**

ÓM Dunne, OC Sheehan, AH Lavan, C Donegan, A Moore, DJP Williams

Department of Geriatric Medicine, Beaumont Hospital, Dublin, Ireland

**P121 Using Structural Equation Modelling to Detect Measurement Invariance in a Measure of Frailty**

Bellinda King-Kallimanis, Rose Anne Kenny, George Savva

The Irish Longitudinal Study on Ageing, Trinity College Dublin, Dublin, Ireland

**P122 A Retrospective Review of the Effectiveness of the Berg Balance Scale in Parkinson's Disease Patients with Varying Degrees of Impairment**

Christina Shannon<sup>1</sup>, Philomena Fogarty<sup>1</sup>, Riona Mulcahy<sup>2</sup>

<sup>1</sup>Waterford Physiotherapy Services, Waterford, Ireland, <sup>2</sup>Waterford Regional Hospital, Waterford, Ireland

**P123 Hip Fracture Risks and Outcomes in a Nursing Home Population**

S Rafferty, C Tiernan, M Al Saeed, PME McCormack, E Dolan, S Kennelly

Connolly Hospital, Dublin, Ireland

**P124 Establishing a New Geriatric Teaching Programme for Undergraduate Medical Students**

ÓM Dunne, C McGreevy, OC Sheehan, DC Gopinathan, A Moore, C Donegan, NG McElvaney, DJP Williams

Royal College of Surgeons of Ireland/Beaumont Hospital, Dublin, Ireland

**P125 Technology Research in Clinical Setting: An Ethnographic Study of the Technology Research for Independent Living (TRIL) Clinic in St. James's Hospital, Dublin**

Chiara Garattini<sup>1</sup>, Marie Bay Brøndum<sup>2</sup>, Ting Ting Shum<sup>1</sup>, Flip van den Berg<sup>1</sup>, Rose Anne Kenny<sup>3</sup>

<sup>1</sup>Technology Research for Independent Living (TRIL) Centre, University College Dublin, Dublin, Ireland, <sup>2</sup>Copenhagen City Council, Copenhagen, Denmark, <sup>3</sup>Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland

**P126 Characteristics of Adults with Syncope in a Population Study: Syncope in Youth as a Moderator for Recent Syncope and Health Outcomes in TILDA**

Rose Anne Kenny<sup>1</sup>, Roman Romero<sup>2</sup>, Diarmuid O'Shea<sup>3</sup>, Bellinda King-Kallimanis<sup>1</sup>

<sup>1</sup>The Irish Longitudinal Study on Ageing, Trinity College Dublin, Dublin, Ireland, <sup>2</sup>St. James's Hospital, Dublin, Ireland, <sup>3</sup>St Vincent's University Hospital, Dublin, Ireland

**P127 Profile of People With Parkinson's Disease Receiving Physiotherapy in Acute Hospital and Community Settings**

Siobhan Twomey<sup>1</sup>, Claire Trotter<sup>1</sup>, Melissa E Chavira<sup>2</sup>, Lucinda Edge<sup>2</sup>, Eimear Ring<sup>3</sup>, Laura Fitzharris<sup>3</sup>, Miriam Mullaney<sup>4</sup>, Conor Mc Nally<sup>4</sup>, Michelle Spencer<sup>5</sup>, Mohammed Atham<sup>5</sup>

<sup>1</sup>Tallaght Hospital, Dublin, Ireland, <sup>2</sup>St. James's Hospital, Dublin, Ireland, <sup>3</sup>HSE Dublin West, Dublin, Ireland, <sup>4</sup>HSE Dublin South West, Dublin, Ireland, <sup>5</sup>HSE Dublin South City, Dublin, Ireland

**P128 Point Prevalence Study of Patients Awaiting Long Term Care and Hospital Acquired Infections in an Acute Hospital**

Mary Buckley, Hung Yui, Catherine Peters, Declan Lyons

Department of Elderly Medicine, Mid Western Regional Hospital, Limerick, Ireland

**P129 Focal Neurological Events Among Patients with Syncope**

Daniel Ryan, Ciara Rice, Joseph Harbison, Roseanne Kenny

St. James's Hospital, Dublin, Ireland

**P130 Audit of Acute Stroke Care: From the Emergency Department to the Acute Stroke Unit**

Melissa McDonnell, Claire Reynolds, Eilis Nic Dhonncha, Aine O'Connell, Martin O'Donnell, Thomas Walsh

University College Hospital Galway, Galway, Ireland

**P131 Taking the Hype Out of Hipe: A Comparison of Acute Hospital Use by Older Residents of Nursing Homes**

O'Keeffe Jonathon, Carey Therese, Tan Kit Mun, O'Shea Diarmuid, Hughes Graham

Medicine for the Elderly Department, St. Vincent's University Hospital, Dublin, Ireland

**P132 The Use of a Questionnaire to Assess Vitamin D Status in an Elderly Population**

Miriam Barry<sup>1</sup>, Cora McGreevy<sup>1</sup>, Brendan Byrne<sup>2</sup>, Caroline Donaghy<sup>2</sup>, Círan Donegan<sup>1</sup>, Alan Moore<sup>1</sup>, Bill Tormey<sup>2</sup>, Ger Collier<sup>2</sup>, David Williams<sup>1</sup>

<sup>1</sup>Department of Geriatric and Stroke Medicine, Beaumont Hospital, Royal College of Surgeons Ireland, Dublin, Ireland, <sup>2</sup>Department of Chemical Pathology Beaumont Hospital, Dublin, Ireland

**P133 Introduction of a Weekend Discharge Initiative in an Acute General Hospital: A Comparative Study**

Ruth Martin, Kieran Anthony O'Connor  
Mercy University Hospital, Cork City, Ireland

**P134 Attitudes to Personal Ageing: An Existential Perspective**

Frances O'Donnell, Ann O'Hanlon, Moira Maguire  
Dundalk Institute of Technology, Co. Louth, Ireland

**P135 A SPARC Approach to Off Site Rehabilitation: Our Experience**

Kit Mun Tan<sup>2</sup>, Roman Romero Ortuno<sup>3</sup>, Joanna McGlynn<sup>1</sup>, Noreen Frawley<sup>1</sup>, Patricia O'Reilly<sup>1</sup>, Olivia Sinclair<sup>1</sup>, Lisa Cogan<sup>1</sup>  
<sup>1</sup>The Royal Hospital Donnybrook, Dublin 4, Ireland, <sup>2</sup>St Vincent's University Hospital, Dublin 4, Ireland, <sup>3</sup>Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland

**P136 A Review of Osteoporosis Treatment in a Continuing Care Setting**

Erica Murphy<sup>1</sup>, Kit Mun Tan<sup>2</sup>, John O'Keefe<sup>3</sup>, Barbara Smyth<sup>3</sup>, Joanna McGlynn<sup>3</sup>, Lisa Cogan<sup>3</sup>  
<sup>1</sup>University College Dublin/Health Service Executive Mid-Leinster General Practitioner Training Scheme, Dublin, Ireland, <sup>2</sup>St Vincents' University Hospital, Dublin, Ireland, <sup>3</sup>The Royal Hospital Donnybrook, Dublin, Ireland

**P137 Oral Anticoagulant Prescribing in Patients with Atrial Fibrillation in a Public Continuing Care Facility**

Louise Smyth<sup>1</sup>, Tariq Zainal<sup>1</sup>, Morgan Crowe<sup>2</sup>, Lisa Cogan<sup>1</sup>  
<sup>1</sup>The Royal Hospital Donnybrook, Dublin 4, Ireland, <sup>2</sup>St Vincent's University Hospital, Dublin 4, Ireland

**P138 Prevalence of Vitamin D Deficiency Among Patients with Acute Stroke**

Adriana Hadbavna, Alan Moore, Ciaran Donegan, David Williams  
Beaumont Hospital, Dublin, Ireland

**P139 Baseline Characteristics of a Cohort of Patients with Ischaemic Strokes**

Ontefetse Ntlholang<sup>1</sup>, Imelda Noone<sup>1</sup>, Serena Hatton<sup>1</sup>, Kit Mun Tan<sup>1</sup>, Graham Hughes<sup>1</sup>, Diarmuid O'Shea<sup>1</sup>, Niall Tubridy<sup>2</sup>, Sean O'Riordan<sup>2</sup>, Chris McGuigan<sup>2</sup>, Morgan Crowe<sup>1</sup>  
<sup>1</sup>Department of Medicine for the Elderly, St Vincent's University Hospital, Dublin, Ireland, <sup>2</sup>Department of Neurology, St Vincent's University Hospital, Dublin, Ireland

**P140 A Patient Over 90 Successfully Thrombolysed Twice**

Clodagh Power<sup>2</sup>, John Bernard Walsh<sup>2</sup>, Joe Harbison<sup>2</sup>, Karl Boyle<sup>2</sup>  
<sup>1</sup>St. James's Hospital, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland

**P141 Standards of Medical Care for Nursing Home Residents in Europe**

Robert Briggs<sup>1</sup>, Stephanie Robinson<sup>1</sup>, Finbarr Martin<sup>2</sup>, Desmond O'Neill<sup>1</sup>  
<sup>1</sup>Centre for Ageing, Neuroscience and the Humanities, Tallaght Hospital, Dublin, Ireland, <sup>2</sup>Guys and St Thomas' NHS Foundation Trust, London, UK

**P142 Does Increased Medical Cover in Nursing Homes Reduce Transfers to A&E and Save Bed Days?**

OC Sheehan, KPC Leung, S Lee, KA Harrington, A Moore, DJP Williams, D Gopinatham, C Donegan  
Department of Geriatric Medicine, Beaumont Hospital, Dublin, Ireland

**P143 Stroke: Early Supported Discharge: An Opportunity Not to be Missed**

Helen O'Brien, Ciara Breen, Maria Ward, Michelle Canavan, Thomas Walsh  
University College Hospital Galway & Merlin Park Hospital, County Galway, Ireland

**P144 Colles Fractures: A Study of Patients from a Hospital Bone Database**

Maeve O'Sullivan, Kin Cheung (Philip) Ng, James Mahon, Georgina Steen, Niamh Maher, JB Walsh, Miriam Casey  
St James' Hospital, Dublin, Ireland

**P145 Outcomes in Patients Who Have Fractured the Neck of Femur Following Introduction of a Fracture Liaison Service**

Jude Ryan, Audrey Butler, Sheila Carew, Tina Sheehy, Aine Costelloe, Brian Lenehan, Catherine Peters, Margaret O'Connor, Declan Lyons  
Department of Medicine Division of Ageing, Midwestern Regional Hospital, Limerick, Ireland

**P146 Prescribing Characteristics and Relationship to Length of Stay Among the Hospitalised Elderly**

OC Sheehan<sup>1</sup>, AH Lavan<sup>1</sup>, ÓM Dunne<sup>2</sup>, A Moore<sup>1</sup>, C Donegan<sup>1</sup>, DJP Williams<sup>1</sup>  
<sup>1</sup>Department of Geriatric Medicine, Beaumont Hospital, Dublin, Ireland, <sup>2</sup>Royal College of Surgeons of Ireland, Beaumont Hospital, Dublin, Ireland

**P147 An Inpatient Study of the Documentation of Weight, Height and Body Mass Index with Appropriate Management and Advice to Patients at Increased Risk**

Shilpa Purushotham, Joanne Kitchen, Riona Mulcahy  
Waterford Regional Hospital, Waterford, Ireland

**P148 Falls Management in an Acute Hospital**

Georgina Steen, Kara Fitzgerald, Nessa Fallon, Niamh Maher, Miriam Casey, Joseph Harbison, Roseanne Kenny, JB Walsh, Conal Cunningham  
Bone Health Service, Mercers Institute for Research on Ageing, St. James's Hospital, Dublin, Ireland

**P149 Capacity Assessment of Older Participants in Randomised Controlled Trials (Rcts)**

Shane O'Hanlon, Margaret O'Connor, Declan Lyons  
University Hospital Limerick, Limerick, Ireland

**P150 Atrial Fibrillation Is Under Recognized and Inappropriately Treated in Older Adults: Cross-Sectional Findings from the Irish Longitudinal Study on Ageing (TILDA)**

John Frewen<sup>1</sup>, Ciaran Finucane<sup>1</sup>, Hilary Cronin<sup>1</sup>, Ciara Rice<sup>2</sup>, Patricia Kearney<sup>1</sup>, Josph Harbison<sup>2</sup>, Rose Anne Kenny<sup>1</sup>  
<sup>1</sup>TILDA, Trinity College Dublin, Ireland, <sup>2</sup>St James' Hospital, Dublin, Ireland

**P151 Prevalence of Depression in an Older Population with Syncope**

Jaspreet Bhangu<sup>1</sup>, Bellinda King-Kallimanis<sup>2</sup>, Conal Cunningham<sup>1</sup>, Rose Anne Kenny<sup>2</sup>  
<sup>1</sup>St. James's Hospital, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland

**P152 A Fracture Liaison Service (FLS) in a Non-Regional Orthopedic Fracture Clinic Respond to the First Fracture and Prevent the Second**

M Elkider, J Quinlan, C Byrne, M Schwindt, P Cotter, R McGovern, E Ahern  
Lourdes Orthopaedic Hospital & Department of Geriatric Medicine, St. Luke's General Hospital, Kilkenny, Ireland

**P153 The Utility of Heel Ultrasound in Diagnosis of Osteoporosis in Colles Fracture and Its Correlation with DXA Scanning**

Danny O'Hare, Jaspreet Bhangu, Niamh Adams, Neasa Fallon, E Thornton, Miriam Casey, JB Walsh  
St James's Hospital, Dublin, Ireland

**P154 An Assessment of Secondary Workup for Osteoporosis in Women Attending an Open Access DXA Service**

Grainne O'Malley<sup>1</sup>, Connor O'Leary<sup>1</sup>, Michael Ryan<sup>2</sup>, Sheila Carew<sup>1</sup>, Tina Sheehy<sup>1</sup>, Aine Costelloe<sup>1</sup>, Caroline Ryan<sup>1</sup>, Margaret O'Connor<sup>1</sup>, Declan Lyons<sup>1</sup>  
<sup>1</sup>Department of Medicine, Division of Ageing and Therapeutics, Mid-Western Regional Hospital, Limerick, Ireland, <sup>2</sup>Department of Biochemistry, St. John's Hospital, Limerick, Ireland

**P155 Intra-Arterial Thrombectomy in a 86 Year Old Lady with Acute Ischaemic Stroke**

AH Lavan<sup>1</sup>, SKK Lee<sup>1</sup>, P Brennan<sup>2</sup>, C Donegan<sup>1</sup>  
<sup>1</sup>Department of Geriatric and Stroke Medicine, Beaumont Hospital, Dublin, Ireland, <sup>2</sup>Department of Radiology, Beaumont Hospital, Dublin, Ireland, <sup>3</sup>Royal College of Surgeons in Ireland, Dublin, Ireland  
Background

**P156 Patient Expectations of Medications Used for Secondary Prevention in Stroke**

Rachel Mulpeter<sup>1</sup>, Rebecca Geary<sup>1</sup>, Joe Harbison<sup>1</sup>, Jaspreet Bhangu<sup>2</sup>  
<sup>1</sup>Trinity College, Dublin, Ireland, <sup>2</sup>St. James's Hospital, Dublin, Ireland

**P157 Prescribing Practices Among Patients Admitted to an Irish Academic Teaching Hospital**

AH Lavan<sup>1</sup>, OC Sheehan<sup>1</sup>, OM Dunne<sup>2</sup>, C Donegan<sup>1</sup>, DJP Williams<sup>1</sup>, A Moore<sup>1</sup>  
<sup>1</sup>Department of Geriatric Medicine, Beaumont Hospital, Dublin, Ireland, <sup>2</sup>Royal College of Surgeons in Ireland, Dublin, Ireland

**P158 Timing of Death from Stroke**

Imelda Noone, Serena Hatton, Barbara Whyte, Diarmuid O'Shea, Morgan Crowe  
St. Vincent's University Hospital, Dublin, Ireland

**P159 Analysis of the Emergency Department Boarders Overnight in a Tertiary Teaching Hospital**

Liam Healy<sup>1</sup>, Mike O'Connor<sup>2</sup>, Colm Henry<sup>1</sup>, Suzanne Timmons<sup>1</sup>  
<sup>1</sup>Mercy University Hospital, Cork, Ireland, <sup>2</sup>Cork University Hospital, Cork, Ireland

**P160 Evaluation of the Community Liaison Nursing Home Outreach Service in a Dublin Teaching Hospital 2009 to 2011**

Mary Martin, Kit Mun Tan, Orla Collins, Graham Hughes, Diarmuid O'Shea  
St Vincents University Hospital, Dublin 4, Ireland

**P161 Utility of Online Referral Systems for Medical Gerontology**

Liz Mc Carron, Jaspreet Bhangu, David Robinson  
St. James's Hospital, Dublin, Ireland

**P162 Irish Public Knowledge of Stroke is Poor Especially in High Risk Groups Including Older Adults, Urban Dwellers and Lower Socioeconomic Classes**

Stephanie Robinson, Ruth Dwyer, Tara Coughlan, Desmond O'Neill, Ronan Collins  
Department of Stroke Medicine, Adelaide and Meath Hospital, Dublin, Ireland

**P163 Thinking About Resuscitation Status**

Rebecca Lee, Emma Phelan  
Cork University Hospital, Cork, Ireland

**P164 Assessment of End of Life Care (EOLC) Outcomes in an Irish Nursing Home Population Using a Modified Version of the Physician Orders for Life-Sustaining Treatment (POLST) Tool**

Josephine Soh<sup>1</sup>, Lelane VanDer Poel<sup>1</sup>, Regina McQuillan<sup>2</sup>, SiobhanM Kennelly<sup>1</sup>  
<sup>1</sup>Department Medicine for the Elderly, Connolly Hospital, Dublin, Ireland, <sup>2</sup>St Francis Hospice, Dublin, Ireland



**P165 Vision, Falls and Fear of Falling in an Older Irish Population: Findings from the Irish Longitudinal Study on Ageing (TILDA)**Eoin Duggan<sup>1</sup>, Ciaran Finucane<sup>3</sup>, Hilary Cronin<sup>1</sup>, James Loughman<sup>2</sup>, Rose Anne Kenny<sup>1</sup><sup>1</sup>The Irish Longitudinal Study on Ageing, Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Department of Ophthalmology, Dublin Institute of Technology Kevin St., Dublin, Ireland, <sup>3</sup>Department of Medical Physics, St James's Hospital, Dublin, Ireland**P166 Ruptured Dermoid Cyst: An Unusual Cause of Delirium**Niamh O'Donoghue<sup>1</sup>, Niamh O'Regan<sup>2</sup>, Kieran Anthony O'Connor<sup>1</sup><sup>1</sup>Mercy University Hospital, Cork, Ireland, <sup>2</sup>Centre for Gerontology and Rehabilitation, University College Cork, Cork, Ireland**P167 Access To Primary Care in the Nursing Home: A Survey of Irish Directors of Nursing**Sinead Morrissey<sup>1</sup>, Rita Gallagher<sup>2</sup>, SiobhanM Kennelly<sup>3</sup><sup>1</sup>Nursing Homes Ireland, Dublin, Ireland, <sup>2</sup>Nursing Homes Nurse Projects, Dublin, Ireland, <sup>3</sup>Connolly Hospital, Dublin, Ireland**P168 Increased Levels of Alcohol Intake are Associated with Atrial Fibrillation in Ireland**John Frewen<sup>1</sup>, Hilary Cronin<sup>1</sup>, Patricia Kearney<sup>3</sup>, Joseph Harbison<sup>2</sup>, Rose Anne Kenny<sup>1</sup>, Ciaran Finucane<sup>1</sup><sup>1</sup>TILDA, Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Department of Medical Gerontology, St. James's Hospital, Dublin, Ireland, <sup>3</sup>Department of Medicine, University College Cork, Dublin, Ireland**P169 Orthostatic Blood Pressure Decay Measured with Finometer Technology Cannot be Used to Predict Participants' Subjective Assessment of Health Status: The Health Inequalities and Ageing in the Community Evaluation (HIACE) Study**John Cooke<sup>1</sup>, Sheila Carew<sup>1</sup>, Eileen Humphries<sup>4</sup>, Caroline O'Connor<sup>1</sup>, Caroline Ryan<sup>1</sup>, Jean Saunders<sup>3</sup>, Margaret O'Connor<sup>1</sup>, David Clinch<sup>1</sup>, Paul Finucane<sup>2</sup>, Stiofain deBurca<sup>4</sup>, Declan Lyons<sup>1</sup><sup>1</sup>Department of Ageing and Therapeutics, Mid-Western Regional Hospital, Limerick, Ireland, <sup>2</sup>Graduate Entry Medical School, University of Limerick, Limerick, Ireland, <sup>3</sup>Statistical Consulting Unit, University of Limerick, Limerick, Ireland, <sup>4</sup>Department of Sociology, University of Limerick, Limerick, Ireland**P170 Management of Bone Health in Patients on Aromatase Inhibitors: Need for Defined Treatment Strategies**

Yvelynne Kelly, Jude Ryan, Catherine Peters, Aine Costelloe, Christine Sheehy, Sheila Carew, Margaret O'Connor, Declan Lyons

University Hospital, Limerick, Ireland

**171 The Impact of Environmental Modifications and Patient Cohorting with Supervision on Rate of Falls in Inpatients Over 65 Years Old**

Valerie Lim, Isweri Pillay, John Cooke, Margaret Molony

South Tipperary General Hospital, Clonmel, Co Tipperary, Ireland

**P172 Hemodynamic Changes in Patients with Osteoporosis: Postural Hypotension as a Risk Factor for Hip Fracture**

Gasim Ahmed, Tina Sheehy, Aine Costelloe, Shala Carew, Jude Ryan, Cathrine Peters, Margeret O Connor, Declan Lyons

University Hospital Limerick, Limerick, Ireland

**P173 The Influence of Healthcare Professional's Confidence and Training in Palliative Care and Treatment Choices at the End-of-Life**Ciara McGlade<sup>1</sup>, Suzanne Timmons<sup>1</sup>, Alice Coffey<sup>2</sup>, Elizabeth Weathers<sup>2</sup>, George Pope<sup>3</sup>, Caitriona Goggin<sup>4</sup>, Willie Molloy<sup>1</sup><sup>1</sup>Centre for Gerontology and Rehabilitation, University College Cork, Cork, Ireland, <sup>2</sup>Catherin McAuley School of Nursing and Midwifery, University College Cork, Cork, Ireland, <sup>3</sup>John Radcliffe Hospitals, Oxford, UK, <sup>4</sup>School of Medicine, University College Cork, Cork, Ireland**P174 Prevalence of Vitamin D Deficiency and Its Relationship to DEXA Scan Results in Patients Presenting with a Neck of Femur Fracture**

Elaine Shanahan, Jude Ryan, Audrey Butler, Sheila Carew, Tina Sheehy, Aine Costelloe, Brian Lenehan, Catherine Peters, Margaret O Connor, Declan Lyons

Mid-Western Regional Hospital, Limerick, Ireland

**P175 3D-COP: A Novel Smartphone App To Help Differentiate Between Delirium, Dementia and Depression**

Shane O'Hanlon, David Meagher

Graduate Entry Medical School, University of Limerick, Ireland

**P176 Five-Year Outcomes of Atrial Fibrillation-Related Stroke: The North Dublin Population Stroke Study**Derek Hayden<sup>1</sup>, Niamh Hannon<sup>1</sup>, Elizabeth Cally<sup>1</sup>, Danielle Ni Chroinin<sup>1</sup>, Orla Sheehan<sup>1</sup>, Michael Marnane<sup>1</sup>, Gillian Horgan<sup>1</sup>, Lorraine Kyne<sup>1</sup>, Joseph Duggan<sup>1</sup>, Eamon Dolan<sup>2</sup>, Timothy Lynch<sup>1</sup>, David Williams<sup>3</sup>, Sean Murphy<sup>1</sup>, Peter Kelly<sup>1</sup><sup>1</sup>Mater Misericordiae University Hospital, Dublin, Ireland, <sup>2</sup>Connolly Memorial Hospital, Dublin, Ireland, <sup>3</sup>Beaumont Hospital, Dublin, Ireland**P177 What are the risk factors associated with Colles' fractures in the elderly?**Susan McAnallen<sup>1</sup>, James Mahon<sup>2</sup>, James Sweeney<sup>1</sup>, Kara Fitzgerald<sup>4</sup>, Georgina Steen<sup>4</sup>, Philip Ng<sup>2</sup>, Maeve O'Sullivan<sup>2</sup>, Conall Fitzgerald<sup>2</sup>, James Walsh<sup>1</sup><sup>1</sup>St. James's Hospital, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland, <sup>3</sup>University College Dublin, Dublin, Ireland, <sup>4</sup>Mercers Institute for Research on Ageing, Dublin, Ireland**P178 Appropriateness of Nursing Home Transfers to Acute Hospital**Ruth Martin<sup>1</sup>, Maura Moriarty<sup>3</sup>, Sarah Coveney<sup>3</sup>, Kathy O'Byrne<sup>2</sup>, Liam Healy<sup>1</sup>, Niamh O'Regan<sup>1</sup>, Ciara McGlade<sup>1</sup>, Josie Clare<sup>3</sup>, Suzanne Timmons<sup>1</sup><sup>1</sup>Mercy University Hospital, Cork, Ireland, <sup>2</sup>South Infirmary and Victoria University Hospital, Cork, Ireland, <sup>3</sup>Cork University Hospital, Cork, Ireland**P179 Estimated Glomerular Filtration Rate and Subtype of Stroke**

Susan O'Callaghan, Affizal Samsudin, Mary Buckley, Hung Yui, Declan Lyons

Midwestern Regional Hospital, Limerick, Ireland

**P180 The Quick Activities of Daily Living Screen, Qadl: Presenting a New, Combined Basic and Instrumental ADL Tool to Predict Cognitive Impairment**

Ronan O Caoimh<sup>1</sup>, Steve Trawley, D William Molloy  
Centre for Gerontology & Rehabilitation, St. Finbarr's Hospital, Cork, Ireland

**P181 Getting Geriatric Medicine Involved: A Re-Audit of a Medicine for the Elderly Consultation Service**

Anna Sheane, Ann McCann, James Mahon, Jawhad Azam, David Crosby, Ann McHugh, David Robinson  
Mercers Institute for Research on Ageing, St. James's Hospital, Dublin, Ireland

**P182 Stratification of the Risk of Adverse Outcomes for Irish, Community Dwelling, Older Adults: Use of a Risk Register**

Ronan O Caoimh<sup>1</sup>, Elizabeth Healy<sup>2</sup>, Elizabeth O Connell<sup>3</sup>, D. William Molloy<sup>1</sup>  
<sup>1</sup>Centre for Gerontology & Rehabilitation, St Finbarr's Hospital, Cork, Ireland, <sup>2</sup>Ballincollig & Viaduct Public Health Centre, Cork, Ireland, <sup>3</sup>Mahon & Ballintemple Public Health Centre, Cork, Ireland

**P183 Appropriate Triage of Older Adults in the ED**

Rosa McNamara<sup>2</sup>, Melinda Moses<sup>1</sup>, Fergal Cummins<sup>3</sup>  
<sup>1</sup>University Hospital Limerick, Limerick, Ireland, <sup>2</sup>Graduate Entry Medical School, University of Limerick, Limerick, Ireland, <sup>3</sup>REDSPOT, Emergency Department, Limerick University Hospital, Limerick, Ireland

**P184 Is Glycated Haemoglobin (HbA1c) a Useful Screening Tool for Diabetes Mellitus in Strokes and Tias?**

James Mahon, Maria Smyth, Diarmuid O'Keeffe, Suzanne Walsh, Olivia Mahon, Karl Boyle, Joe Harbison  
Mercer's Institute for Research on Ageing, St James's Hospital, Dublin, Ireland

**P185 The Occurrence of Hypercalcaemia in Patients Commencing Recombinant Parathyroid Hormone (1–34 and 1–84) Therapy**

James Mahon, Najia Siddique, Georgina Steen, Kara Fitzgerald, James Sweeney, Susan McAnallen, Elizabeth McCarron, J Bernard Walsh, Miriam Casey  
Bone Health Service, Mercer's Institute for Research on Ageing, St James's Hospital, Dublin, Ireland

**P186 The National Stroke Awareness Campaign: A Stroke of Success?**

Irene Hartigan, Liz O'Connell, Brid Kilonzo, Sinead O'Brien, Elizabeth Weathers, Nicola Cornally, Geraldine McCarthy  
University College Cork, Cork, Ireland

**P187 The Impact of Advancing Age on Coronary Disease Prevalence and Associated Mortality in End Stage Kidney Disease**

Shane O'Hanlon<sup>1</sup>, Rosa McNamara<sup>2</sup>, Ahad Abdalla<sup>3</sup>, Liam Casserly<sup>3</sup>, Con Cronin<sup>3</sup>, Declan Lyons<sup>1</sup>, Austin G Stack<sup>3</sup>  
<sup>1</sup>Division of Ageing and Therapeutics, Department of Medicine, University Hospital Limerick, Limerick, Ireland, <sup>2</sup>Graduate Entry Medical School, University of Limerick, Limerick, Ireland, <sup>3</sup>Department of Nephrology, University Hospital Limerick, Limerick, Ireland

**P188 A Review of Deaths in the ED**

Rosa McNamara<sup>1</sup>, Grainne Ni Mhaille<sup>2</sup>, Fergal Cummins<sup>3</sup>  
<sup>1</sup>Graduate Entry Medical School, University of Limerick, Limerick, Ireland, <sup>2</sup>University Hospital Limerick, Limerick, Ireland, <sup>3</sup>REDSPOT, Emergency Department, Limerick University Hospital, Limerick, Ireland

**P189 Ageism in Head and Neck Cancer (HNC): Fact or Fiction?**

Eleanor O'Sullivan  
University College Cork, Cork, Ireland

**P190 Age Friendly Communities: Perceived Ageism Among Community Based Adults**

Aoife Bailey, Amina Jaji, Elaine Crosby, Patricia Greville, Yohanca Skeet, Ann O'Hanlon, Rodd Bond  
Netwell Centre, Dundalk Institute of Technology, Dundalk, Ireland

**P191 Telehealth Improves Health and Self-Care Behaviours Among Patients with Diabetes and Heart Disease**

Ann O'Hanlon<sup>1</sup>, Brian O'Mullane<sup>1</sup>, Ben Knapp<sup>2</sup>, Rodd Bond<sup>1</sup>  
<sup>1</sup>Netwell Centre, Dundalk Institute of Technology, Dundalk, Ireland, <sup>2</sup>Institute for Creativity, Arts, and Technology, Virginia Tech., USA

**P192 Outcomes of Tilt Table Testing in the Diagnosis of Syncope: A Single Centre Experience**

Roisin Colleran, Joseph Sheehan, Antoinette Larkin, Teresa Donnelly  
Portiuncula Hospital, Ballinasloe, Ireland

**P193 Examining the Predictive Power of the FRAX Score: Findings from the Irish Longitudinal Study on Ageing**

Ciaran Finucane<sup>1</sup>, Joseph Browne<sup>3</sup>, Hilary Cronin<sup>1</sup>, Rose Anne Kenny<sup>2</sup>, Bernard Walsh<sup>2</sup>  
<sup>1</sup>TILDA, Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Mercers Institute for Successful Ageing, St James's Hospital, Dublin, Ireland, <sup>3</sup>Department of General Medicine, Tralee General Hospital, Kerry, Ireland



## PLATFORM

### O1

#### A Comparison of the Prescription of Bone Health Medications Between General Practitioners Led and Geriatrician Led Nursing Homes

Cora McGreevy, Miriam Barry, Alan Moore, Ciaran Donegan, David Williams

*Royal College of Surgeons Ireland, Beaumont Hospital, Dublin, Ireland*

**Introduction:** Despite the high burden of osteoporosis in nursing homes, several studies have suggested that osteoporosis screening and therapies are underutilized in this population. An American study of >180,000 nursing home residents found that only 9.1 % of patients received anti-resorptive therapy despite the expected high prevalence of osteoporosis in this setting. There has been no previous research on osteoporosis medication use or comparison of the management of this condition in geriatrician versus general practitioner (GP) led nursing homes.

**Methods:** This study compared prescribing habits of osteoporosis related drugs in a geriatrician led nursing home versus 4 GP led facilities. Following informed consent/assent, medication data over a 7 day period was collected from medication charts. Demographic information including the resident's age, gender and past medical history was noted. We assessed patients 10 year probability of fracture using the FRAX tool.

**Results:** 168 patients were studied in total (84 patients in the geriatrician led facility and 84 in GP led facilities). In the geriatrician led facility 34 patients (50 %) had a 10 year probability of a hip fracture of  $\geq 3$  % and a 10 year probability of a major fracture of  $\geq 20$  % on their FRAX scores. Of these patients only 3 (8 %) had a DEXA scan and 17 (50 %) were on calcium/vitamin D  $\pm$  anti-resorptive therapy. In the GP led facilities, 32 patients (47 %) satisfied the high risk criteria for hip and major osteoporotic hip fractures. one patient had a DEXA scan and 13 (40 %) were on calcium/vitamin D  $\pm$  anti-resorptive therapy. Disease burden was higher in the geriatrician led facility than in the GP led facilities ( $p = 0.0348$ ).

**Discussion:** We found little difference in osteoporosis prescribing patterns between GP led and geriatrician led facilities. However, given the findings of high fracture risk, the low level of fracture protection and almost negligible DEXA scanning, our findings suggest that there is significant room for improvement in the management of osteoporosis care in the long term care setting.

### O2

#### Osteoporosis: A Clinical Nurse Specialist-Led Pre-assessment Clinic

Nessa Fallon, Kara Fitzgerald, Georgina Steen, Niamh Maher, Rosaleen Lannon, Eilish McDermott, Miriam Casey, JB Walsh

*Bone Health Service, Mercers Institute for Research on Ageing, St James's Hospital, Dublin, Ireland*

**Introduction:** In the Bone Health and Osteoporosis Unit in St James's Hospital, twice-weekly CNS-led pre-assessment clinics are the first point of contact for patients who are referred for assessment

of their bone health and risk for fracture. A comprehensive assessment is performed by a CNS on all patients and includes risk factors for osteoporosis, risk factors for falls and advice on diet, lifestyle modifications and education on treatment. This includes a DXA scan, a calcaneal bone ultrasound, a full biochemical and haematological workup including an estimation of serum bone markers. Patients are commenced on treatment as indicated by their assessments. This enables appropriate follow-up in the bone health clinics.

**Methods:** Data was collected from the electronic database maintained in the clinic and electronic attendance records.

**Results:** Referrals come from three sources: (1) External referrals from their general practitioner or other hospitals; (2) General Medicine Clinics within St James's Hospital; (3) Fracture Liaison Service. In 2011, a total of 1,222 patients were seen in these clinics, representing an increase of 58 % from 2010. 553 new attendances were recorded, including 89 hip fractures and 75 colles fractures. Of 408 return visits (279 in 2010), 261 patients had IV zoledronic infusions and 82 patients received Denosumab subcutaneous injection twice-yearly. Return attendances are essential to monitor the efficacy of treatments, for the management of side-effects and to promote better medication compliance.

**Discussion:** CNS-led pre-assessment clinics continue to play an essential role in the assessment and treatment of osteoporosis. The number of new patients attending for initial assessment doubled in 2011 from the previous year. This reflects a greater awareness of osteoporosis and the established service available in St James's Hospital, leading to a greater demand.

### O3

#### Zoledronic Acid in Osteoporosis: Who Responds Better?

Najia Siddique<sup>1</sup>, Ng Kin Cheung<sup>1</sup>, Kathleen Bennett<sup>1</sup>, Rosaleen Lannon<sup>1</sup>, Aoife Quinn<sup>1</sup>, Claire Harney<sup>2</sup>, MC Casey<sup>1</sup>, JB Walsh<sup>1</sup>

<sup>1</sup>Bone health service, Mercers Institute for Research on Ageing, St. James's Hospital, Dublin, Ireland, <sup>2</sup>Diagnostic imaging, St. James's Hospital, Dublin, Ireland

**Introduction:** IV Zoledronic acid (ZA) has been proven to increase spinal BMD in osteoporosis. However some patients may not respond to this therapy. There is limited data in the literature to identify the factors which might predict treatment failure. This study looks at the baseline characteristics of patients who have inadequately responded to ZA. It also considers any significant correlation among these characteristics when compared to BMD.

**Methods:** A retrospective study. A cohort of 192 patients with postmenopausal osteoporosis on ZA treatment was analysed. Patients were followed up for 12–18 months after their 1st dose. 43 patients who had their DEXA scans performed at 12–18 months post ZA were selected for further analysis. All these patients were taking Calcium/Vitamin D at time of infusion. These patients were divided into two main groups: Responder versus Non responder. Patients who failed to achieve a BMD gain of  $\geq 3$  % at lumbar spine at 12–18 months were considered non responders. The differences in baseline characteristics between both groups were compared and any correlations were looked at. *T* test and Logistic regression model were used for statistics. A *p* value  $<0.05$  was considered significant.

**Results:** There was no significant difference in the general characteristics of both groups i.e. age, medical or drug history. There was no significant difference in their GFR, Bone markers PTH, 25 (OH)D, serum calcium and 24 h urinary calcium. There was a significant

difference in BMD between Responders  $0.76 \pm 0.13$  versus Non responders  $0.87 \pm 0.19$ ,  $p = 0.03$ . A significant trend towards an increase in response with lower baseline BMD was observed ( $p = 0.04$ ). Higher baseline BMD was associated with higher baseline BMI ( $p = 0.03$ ), osteocalcin ( $p = 0.029$ ) and CTX ( $p = 0.00$ ).

**Discussion:** This study establishes that patients with a lower BMD at baseline show a better response to ZA and vice versa, so the magnitude of the response to ZA is increased for subjects with relatively severe osteoporosis compared to patients with less severe disease.

## O4

### The Development of a Mathematical Model to Predict the Time to Osteoporosis (TTO) Using DEXA (Dual-Energy X-Ray Absorptiometry) Scanning

Paul Scully, Catherine Peters, Sheila Carew, Aine Costelloe, Tina Sheehy, Margaret O'Connor, Declan Lyons

*Mid-Western Regional Hospital, Limerick, Ireland*

**Background:** Dual-Energy X-Ray absorptiometry (DEXA) is the gold standard used for measuring bone mineral density and such readings are currently used to predict osteoporosis and osteoporotic fractures. However, no similar prediction model has been developed to identify the time it will take to become osteoporotic (TTO) based on DEXA scanning. The aim of this study was to develop a mathematical model to determine the TTO based on two or more DEXA scans with TTO defined as the age at which the patient will enter the osteoporotic T-score range.

**Methods:** Fifty patients who had previously undertaken five DEXA scans were identified from the DEXA database. T-scores were graphed against patient age using GraphPad Prism software. Straight line curves for the most recent scans and cumulative scans were generated with the age at which the curve intersects  $T = -2.5$  being classed as TTO.

**Results:** The mathematical model developed successfully predicted the time to osteoporosis for each patient, as well as creating a cumulative osteoporotic trend based on total DEXA scans performed. Additionally, if the patient was classified as osteoporotic following DEXA scanning, the model also successfully predicted the Time to Exit Osteoporosis (TEO).

**Discussion:** The TTO provides a simple and informative parameter of DEXA scanning that a patient can immediately comprehend and understand, while also providing a more simple measure to monitor response to therapy. Based on the results presented, TTO can be incorporated into future DEXA scans result summaries. Further research will involve validation of this tool.

## O5

### Effect of Orthostatic Hypotension on Bone Mineral Density Amongst Older Irish Adults

AM O'Mahony, GM Savva, RA Kenny

*Trinity College Dublin, Dublin, Ireland*

**Introduction:** Epidemiological studies have reported an association between osteoporosis and cardiovascular disease. Orthostatic hypotension (OH) has been identified in studies as a risk factor for

cardiovascular morbidity and mortality. This study explores the relationship between bone mineral density (BMD) and OH among older Irish adults.

**Methods:** The data used in this study is from Wave 1 of The Irish Longitudinal Study on Ageing (TILDA), a large prospective study of 8,504 people aged 50 years and older living in Ireland. 5,241 participants had BMD measured by stiffness index using a heel bone ultrasound scan. 6,153 participants were assessed for OH using two seated and one standing blood pressure measurements.

**Results:** Men and women with OH have a higher prevalence of both osteoporosis (13.33 vs. 7.28 %) and osteopenia (47.37 vs. 40.05 %) than those without OH, with a statistically significant result at the 5 % level (Pearson  $\chi^2 = 25.789$ ,  $p < 0.001$ ). After adjusting for age, smoking, body mass index (BMI) and physical activity levels, the negative effect of OH on heel stiffness index persisted in men (coefficient =  $-3.807$ ,  $p = 0.033$ , 95 % CI:  $-7.299$  to  $-0.314$ ) and women (coefficient =  $-2.264$ ,  $p = 0.070$ , 95 % CI:  $-4.716$  to  $0.188$ ).

**Discussion:** To our knowledge, no previous study has explored the relationship between OH and BMD. Our study shows a statistically significant relationship between OH and lower BMD. The association of OH with lower BMD might be explained by a possible reduction in coronary blood flow and myocardial ischaemia during episodes of OH. Myocardial ischaemia may cause renal ischaemia. Reduced renal function has been linked to both peripheral arterial disease, and higher rates of bone loss and increased fracture risk. The association of OH and BMD has clinical implications. Individuals with OH are at increased risk of falling, and if osteoporosis is present there is increased risk of fractures.

## O6

### Ageing, Diversity and Poverty Across the Life-Course

Kieran Walsh, Caroline Finn, John Cullinan, Thomas Scharf

*National University of Ireland Galway, Galway, Ireland*

**Introduction:** The intersection of age and poverty across the life-course is generally underexplored in Ireland. There is an absence of work focusing on the heterogeneity of the Irish older population, and whether diversity based on socio-economic status, residential location, individual characteristics, ethnic background or nationality can influence deprivation in later life. In addition, there has been no attempt to understand how such sub-groups conceptualise issues of poverty and what they prioritise for quality of life. Internationally, while the literature is more established, there remain information gaps concerning the role of old age and diversity in the construction of disadvantage. The aim of this paper is to explore the lived experiences of a diverse group of older people with respect to poverty and quality of life across the life-course.

**Methods:** A mixed methodology was used incorporating two phases of work. First, a secondary analysis of national data from the 2009 EU survey on living and income conditions (EU-SILC: 65 +  $n = 1,831$ ) to identify deprivation trends and information gaps. Second, semi-structured interviews ( $n = 21$ ) and 9 focus group discussions ( $n = 69$ ) were conducted to gather the perspectives of key groups of older people (e.g. those in nursing homes; those in rural areas; those in urban deprived areas; those with a disability; members of the traveller community; and members of an ethnic minority group).

**Results:** Understandings of poverty and quality of life differed across groups, with more marginalised and vulnerable individuals focused on basic necessities. Patterns of cumulative and generational disadvantage, discrimination and exclusion, and restricted choice were evident for a number of groups. However, common themes with

respect to pension payments, relative appreciation, risk factors and intergenerational dependencies were evident across all participants.

**Discussion:** The findings are discussed with reference to the relative nature of poverty and issues with respect to conceptualisation and measurement.

## O7

### Promoting Inclusion in Later Life: Contrasting Policy Responses

Thomas Scharf

*National University of Ireland Galway, Galway, Ireland*

**Introduction:** Social exclusion is of fundamental importance in ageing societies, since it threatens societal cohesion and reduces individuals' quality of life (Scharf and Keating, 2012). However, 'social exclusion' and related notions of 'social inclusion' are poorly articulated in social gerontology and tend to be used uncritically in ageing policy. Building on a review of the concept of social exclusion as it pertains to ageing adults, this paper develops a critique of public policy responses to perceived disadvantage in later life.

**Methods:** The paper reviews empirical studies undertaken over a number of years in diverse environmental contexts and with heterogeneous groups of older people. Drawing on a body of published research, it highlights structural, environmental, and individual drivers of social exclusion in later life.

**Results:** Reflecting the different drivers of social exclusion in later life, the paper identifies a variety of ways in which ageing policy might usefully respond to disadvantages experienced by older people. Such approaches are contrasted with the reality of ageing policy in European countries. Applying a critical social policy approach that draws on the work of Ruth Levitas (2005), limitations of contemporary public policy making are highlighted in relation to its ability to address exclusion in later life.

**Discussion:** The paper challenges policy makers, practitioners and researchers to consider approaches to ageing policy that reach beyond the prevailing active ageing and healthy ageing frameworks. It argues for a major focus on policy measures that not only address individual and environmental sources of older people's exclusion, but also the structural sources of disadvantage that reduce many older people's quality of life.

#### References:

- Levitas R (2005) *The inclusive society? Social exclusion and new labour*, 2nd edn. Basingstoke, Macmillan  
Scharf T and Keating N (eds) (2012) *From exclusion to inclusion in old age: a global challenge*. Bristol, Policy Press.

## O8

### Deprivation in Cold Weather Increases the Risk of Hospital Admission with Hypothermia in Older People

Roman Romero-Ortuno, Maria Tempany, Lydia Dennis, Bernard Silke

*Division of Internal Medicine, St James's Hospital, Dublin, Ireland*

**Introduction:** Older adults who live in deprived neighbourhoods are vulnerable to poor health, and cold weather may contribute to hospital

admissions in this group. In cold weather conditions, the inability to maintain adequate body temperature (indoors or outdoors) may favour the development of hypothermia. Hypothermia is a medical emergency defined as a body temperature lower than 35 °C due to prolonged exposure to ambient cold temperatures without appropriate protection. Our aim was to study the contribution of material deprivation to the incidence of hypothermia in older people, from an Irish hospital perspective.

**Methods:** of all patients aged  $\geq 65$  years experiencing their last medical admission to our hospital between 1 January 2002 and 31 December 2010, we selected those who presented with a body temperature of  $< 35$  °C. Their characteristics were compared with those of a random sample of 200 (age and gender-matched) non-hypothermic admissions. A multivariate logistic regression model was used to identify predictors of hypothermia. The following predictors were considered: age, gender, mean air temperature on the day of admission, year of admission, comorbidity, major diagnostic categories, and material deprivation as per the Irish National Deprivation Index (NDI). **Results:** Eighty patients presented with hypothermia over the period. Hypothermic patients presented in colder days (mean 8.8 vs. 10.8 °C,  $P < 0.001$ ), they were less likely to present in summer ( $P = 0.002$ ), and their mortality was high (50 vs. 17 %,  $P < 0.001$ ). The interaction term NDI \* air temperature was a significant multivariate predictor of hypothermia (OR = 1.03, 95 % CI: 1.00–1.06,  $P = 0.033$ ).

**Discussion:** Our study shows that a readily available measure of material deprivation increases, when the weather is cold, the risk of hospital admission with hypothermia in older people. The NDI could be an adequate tool to target fuel poverty in Irish older people.

## O9

### An Exploration of the Perceptions of Ageing of Older Adults with an Intellectual Disability

Mary McCarron, Eilish Burke, Rachael Carroll, Philip McCallion

*Trinity College Dublin, Dublin, Ireland*

**Introduction:** Longevity in the field of intellectual disability (ID) is now well established. However the ageing experience of people with ID may be compounded by multi-morbidity and a lifetime of negative perceptions all of which may challenge the attainment of a successful and positive ageing experience. This paper explores the perceptions people with ID (PWID) hold of ageing and suggests that by listening to the voice of PWID, policy and practice can be positively influenced.

**Methods:** Data for this paper was extracted from the findings of the first wave of the Intellectual Disability Supplement to The Irish Longitudinal Study on Ageing (IDS-TILDA). IDS-TILDA is a national longitudinal study on the ageing of 753 people with an ID aged between 41 and 90 years old randomly selected from the National Intellectual Disability Database in Ireland. This included 373 who self-reported on a number of ageing perceptions items including several open-ended questions. Statistical analysis was undertaken utilising SPSS 19 and all verbatim responses were analysed using PASW Text Analytics for Surveys 4.1 enabling core concept extraction and providing insights into the nuances of people's opinion.

**Results:** Over 70 % of self-reporting respondents described themselves as young to middle aged and 48 % felt things got better as their years advanced. However people's perceptions of ageing in terms of health and functioning were strongly associated with negative and stereotypical consequences of change.

**Discussion:** Negative views are unlikely to support successful ageing, whereas encouraging active ageing is likely to help improve health

and wellbeing in older years. The findings here suggest that there is much to build upon, but there is also work to be done with PWID to address ageing perceptions that challenge successful ageing.

## O10

### An Exploration of the Employment Status of People Over Forty with an Intellectual Disability in Ireland

Mary McCarron, Eimear McGlinchy, Rachael Carroll, Philip McCallion

Trinity College Dublin, Dublin, Ireland

**Introduction:** This paper presents the findings from the first wave findings of the Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS-TILDA) on the employment of people aged 40 years + with an intellectual disability. Employment is important given reports that engaging in the labour market is not only rewarding monetarily, but also increases opportunities to develop social relationships. Yet, underemployment has been identified as a critical issue for people with intellectual disabilities.

**Methods:** The first wave of the Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS-TILDA), included a series of questions on employment, and yielded data for a representative sample of 753 participants with intellectual disability aged 40 and over randomly selected from Ireland's National Intellectual Disability Database (NIDD).

**Results:** Overall, 6.9 % of participants were in regular paid employment. A further 7.6 % reported that they were in employment but were actually attending a day service. 12 % worked in a sheltered workshop and 73.5 % were unemployed. Of those in paid employment less than half received minimum wage. 80 % of respondents attended a day service. Age, level of ID, level of education and residential circumstances all have a significant influence on employment status. No significant difference was found for employment status with regard to self-reported health, depression and loneliness. Those who were unemployed were significantly more likely to have difficulty participating in social activities than those in regular paid work, sheltered workshop or those who perceived themselves as being employed.

**Discussion:** Representative Irish data reported here is consistent with international reports of underemployment, but some unique issues emerged worthy of further exploration of the importance of actual versus perceived employment.

## O11

### An Augmented Exercise Programme in the Acute Setting Can Improve Mobility and Quality of Life in Frail Hospitalised Older Patients: A Controlled Trial

Ruth McCullagh<sup>1</sup>, Eilis Fitzgerald<sup>4</sup>, Ruth Martin<sup>2</sup>, Carol Kennedy<sup>1</sup>, Niamh O'Reilly<sup>1</sup>, Kieran O'Connor<sup>2</sup>, Suzanne Timmons<sup>3</sup>

<sup>1</sup>Physiotherapy Department, Mercy University Hospital, Cork, Ireland, <sup>2</sup>Department of Geriatric Medicine, Mercy University Hospital, Cork, Ireland, <sup>3</sup>Department of Gerontology & Rehabilitation, University College Cork, Cork, Ireland, <sup>4</sup>School of Physiotherapy, Royal College of Surgeons in Ireland, Dublin, Ireland

**Introduction:** Functional decline is experienced by up to 50 % of older hospitalised patients. Frailty may influence this decline. A pilot trial was conducted to determine the levels of frailty in our older

hospitalised population and the effects of augmented exercise on length of stay, function and quality of life.

**Methods:** A controlled pilot trial was conducted over an 8 week period in an acute setting involving medical in-patients over 65. Patients referred for physiotherapy were screened and, if eligible for participation, were alternately allocated to the usual care group (three times weekly physiotherapy) and the intervention group (usual care augmented with two half-hour exercise sessions daily, five times weekly). Differences from baseline within and between groups were compared for the following parameters: frailty (grip strength); physical ability (Short Physical Performance Battery; Barthel Index); falls (number of falls, MFES); Depression (ABC Depression Screen); and Quality of Life (EuroQol-5).

**Results:** Of the 185 older patients admitted during the trial, 55 were screened. Forty-two (76.4 %) of the patients were categorised as frail. Forty of these were eligible for the trial; 20 patients to each group. Groups were comparable at baseline. On discharge, the intervention group showed better physical ability (SPPB:  $p = 0.03$ ) and quality of life (EQ-Act:  $p = 0.02$ , EQ-VAS:  $p = 0.001$ ) than the control group with their median length of stay 2 days less than the control group. The cost of running the service for 8 weeks was approximately €778.

**Discussion:** The results show that augmented exercise can improve mobility and quality of life. These results are encouraging and support the value of a large randomised controlled trial.

## O12

### The Frailty Index in Europeans: Association with Age and Mortality

Roman Romero-Ortuno, Rose Anne Kenny

Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland

**Introduction:** The concept of frailty is well known to clinicians, but the operationalisation of this construct remains a research challenge. The Frailty Index (FI) is an approach to the operationalisation of frailty based on accumulation of deficits. The majority of studies on FI have been conducted outside Europe. Our objective was to construct gender-specific FIs from a large sample of Europeans and study their associations with age and mortality.

**Methods:** This study is based on the Survey of Health, Ageing and Retirement in Europe (SHARE, <http://share-dev.mpsoc.mpg.de/>), a large longitudinal population-based survey. We studied 16,217 females and 13,688 males aged  $\geq 50$  from wave 1 (2004–2005). Mortality data was collected between 2005 and 2006 (mean follow-up: 2.4 years). A 40-item FI was constructed as per standard procedure. We conducted regression curve estimations between age and the FI. Logistic regressions were used to assess the relative effects of age and the FI towards mortality.

**Results:** In both genders, there was a significant non-linear association between age and the FI (females: quadratic  $R^2 = 0.20$ ,  $P < 0.001$ ; males: quadratic  $R^2 = 0.14$ ,  $P < 0.001$ ). Overall, the FI was a much stronger predictor of mortality than age, even after adjusting for the latter (females: age-adjusted OR 100.5, 95 % CI: 46.3–218.2,  $P < 0.001$ ; males: age-adjusted OR 221.1, 95 % CI: 106.7–458.4,  $P < 0.001$ ). There were clinically significant differences in mortality between genders, with males having greater mortality rates despite having lower mean FI values.

**Discussion:** for the first time, we operationalised an FI in a large representative sample of community-dwelling Europeans. The FI had the expected properties. If the European FI is to be operationalised in



clinical practice, our findings may serve as a reference to help European practitioners identify at-risk patients who need priority access to resources.

## O13

### LSVT BIG Exercise Therapy Programme for People with Parkinson's Disease

Suzanne Ryan, Siobhan Quinn, Ronan Collins, Tara Coughlan, Sean Kennelly, Desmond O' Neill

*Tallaght Hospital, Dublin, Ireland*

**Background:** Lee Silverman Voice Treatment (LSVT) BIG is an innovative exercise therapy programme for people with Parkinson's disease (PD). LSVT-BIG focuses on high amplitude movements, distinguished by multiple repetitions, high intensity and increasing complexity. It is delivered in 16 individual 1-hour treatment sessions. The overall goal is to improve the individual's perception of how they move and to "recalibrate" them so that they use bigger movements "automatically". We have recently started using this programme for PD rehabilitation in our Age-Related Day Hospital.

**Methods:** This case study is of an 82 year old lady with a 3-year history of PD was enrolled to participate in a 4 week LSVT-BIG programme, supervised by an LSVT-BIG certified physiotherapist. Outcome measures were: the Unified Parkinson's Disease Rating Scale (UPDRS-motor section only), Berg Balance Score, Modified Falls Efficacy Scale (mFES), timed "up-and-go" (TUG), TUG-cognitive and timed sit to stand. Video analysis of the patients gait was taken pre and post treatment.

**Results:** There was full attendance at all sessions. At baseline assessment the patient's main difficulties were getting out of a chair and festination on turning. On video analysis objective improvements were evident in both these functional tasks. After 4-weeks an improvement was also noted in her TUG and her modified FES, although she still had a fear of falling.

Outcome measures pre-treatment/post-treatment: UPDRS (motor section)  $^{8/56}$   $^{7/56}$ ; Berg  $^{49/56}$   $^{50/56}$ ; Modified FES 6.5 7.8; TUG 40 s (cognitive 42 s) 29 s (cognitive 34 s); STS  $\times$  5 30 s 26 s.

**Discussion:** This case study showed promising results for improved performance in TUG, STS and functional movements following the 4-week LSVT-BIG programme. Further randomised studies are necessary to validate the long-term efficacy of LSVT-BIG versus conventional PD rehabilitation programmes on daily activities and functioning and quality of life.

## O14

### Use of Care Bundles as a Practice Development Initiative Across Three Departments in a Non-acute Hospital Setting

Eileen Shinnners, Penny Long, Avril Tupas, Libby McGrane

*Our Lady's Hospice & Care Services, Dublin, Ireland*

**Introduction:** Care Bundles, originally designed in America, have been adapted for use here in Ireland. A 'care bundle' is a collection of evidence-based practices, when consistently applied aim to improve quality of patient care (McCarron 2011). Care bundles have been developed for a range of conditions/disease processes (HPSC, 2008)

and reduces overall hospital mortality (Robb et al. 2010). Therefore the project was designed to apply a method of measuring best practice standards against actual care delivered across three departments (Rheumatology, Palliative Care and Care of Older Person) over a 12 month period (Jan–Dec 2011).

**Methods:** Four care bundles (Urinary Catheters, Peripheral Venous Catheters, Central Venous Catheters and Enteral Feeding) were developed based on actual care provided. Ward Champions were nominated, who performed monthly point prevalence audits based on care delivered. These Champions took responsibility for maintaining ward records, as well as providing feedback to ward staff on results and actions if required to improve compliance levels. Practice Development Nurses collated monthly data to generate compliance statistics. Results were disseminated internally.

**Results:** All data collected was maintained and results were generated using Microsoft Excel. At initiation, compliance levels varied between wards due to differences in existing care standards. As the project developed audit results demonstrated consistency in improved clinical practice. In January 2011, average compliance levels were 58 % across all bundles. This improved to 88 % by April 2011 and was 98 % by December 2011.

**Discussion:** Care bundles offer advantages to improving patient care by consistently applying evidence-based practice. Through their implementation, we have demonstrated improvements in standards of care for patients with Urinary Catheters, Peripheral Venous Catheters, Central Venous Catheters and Enteral Feeding. Continued education and application of care bundles is recommended to optimise patient care and to strive towards continuous quality improvements.

## O15

### Care Planning Meetings: Participation for Whom?

Sarah Donnelly<sup>1</sup>, Suzanne Cahill<sup>2</sup>, Des O'Neill<sup>1</sup>, Robbie Gilligan<sup>2</sup>, Brenda Mehigan<sup>1</sup>, Ronan Collins<sup>1</sup>

<sup>1</sup>Tallaght Hospital, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland

**Introduction:** Care Planning Meetings (CPM's) are regularly conducted in hospital settings where patients, family members and the multi-disciplinary team (MDT) meet to exchange information, plan for the future and facilitate decision-making. Published literature offered limited insight into the meetings process and no practice guidelines which focus on patient participation within CPM's exist. Although intended to encourage active participation and empowerment of older people and their families, doubts existed about whether this was happening in practice.

**Methods:** A three-stage action research cycle was used to develop a framework to recommend ways of improving practice by systematic critical enquiry through working with the MDT as 'co-researchers'. Cycle I included a convenience sample of ten CPM's, as did Cycle 2 with inpatients assessed as having a cognitive/communication difficulties. Cycle 3 involved the development of a training manual for healthcare professionals. A multiple method study design was adopted which included participant observations of CPM's, interviews and staff focus groups.

**Results:** Findings showed some fundamental differences in MDT opinions about the purpose and outcomes of CPM's. Patients were found to have low levels of participation as indicated by verbal utterances, particularly those with a cognitive impairment. Family members meanwhile had much higher participation levels. MDT members exhibited exclusionary practices including poor eye contact, speaking

about patients in the third person and directing conversation and questions to family members rather than the patients. The study showed that CPM's were important events for all participants. All patients reported the importance of their involvement in their CPM.

**Discussion:** Findings highlighted how healthcare professionals can both promote and impede patient participation through informal processes and good/poor communication. Healthcare professionals should elicit each patients desire to participate in advance of their CPM. To foster a climate encouraging optimal patient participation a framework promoting an individualised approach is also recommended.

## O16

### The Success of a Medical Admission Proforma on Thrombo-prophylaxis Use in Acute Medical Inpatients in a Hospital Practising an Integrated Model of Elderly Care

Elmuataz Osman Ahmed<sup>1</sup>, Niall Colwell<sup>1</sup>, Christina Donnellan<sup>1</sup>, Sam Kingston<sup>1</sup>, Clare O'Leary<sup>1</sup>, Paud O'Regan<sup>2</sup>, Isweri Pillay<sup>1</sup>

<sup>1</sup>South Tipperary General Hospital, Western Road, Clonmel, Co. Tipperary, Ireland, <sup>2</sup>University College Cork, Cork, Ireland

**Introduction:** Thrombo-prophylaxis in medical patients reduces morbidity due to venous thromboembolism (VTE) 1. This three cycle audit over 6 years, determined whether patients in a 280-bedded acute hospital, practising an integrated model of elderly care, received appropriate thrombo-prophylaxis and the resulting effect of a medical admission proforma (MAP) on prescribing rates.

**Methods:** 100 consecutively admitted medical patients were assessed for risk of VTE and appropriate thrombo-prophylaxis rates calculated, on the basis of a chart and drug kardex review in 2006, 2009 and 2012. After 2006, the MAP was introduced and included a printed reminder to consider VTE prophylaxis. The position of the reminder was changed after 2009. The most recent available evidence-based consensus guidelines were used to assess VTE risk and to ensure appropriate prescribing.

**Results:** Throughout all cycles, 65 % of the occupied bed days in medical inpatients were >65 years and the male: female ratio was 1:1.3. Reduced mobility, age >75 years and acute infection were the top three indications for thrombo-prophylaxis. In 2006, the rate of appropriate VTE thrombo-prophylaxis was 37.5 %. In 2009, this doubled to 75 %. In 2012, the rate was 86 %, despite an increase in the numbers of patients at risk from 51 % in 2006 to 78 % in 2012. Contraindication to thrombo-prophylaxis rates remained constant at 11 %, 14 % and 12 % in consecutive cycles. No patient with a contraindication received thrombo-prophylaxis. There was a gradual shift to the use of tinzaparin over enoxaparin over the course of the audit, reflecting available safety data in the elderly and in renal impairment.

**Discussion:** Ireland's national prescribing rates of thrombo-prophylaxis is approximately 30 % in acute medical inpatients. There has been a sustained and significant increase in adherence to best practice guidelines by the use of a MAP.

## O17

### Timed-Up-and-Go and Walking Speed Can Identify Frail Members of the Older Population

George Savva<sup>1</sup>, Orna Donoghue<sup>1</sup>, Frances Horgan<sup>2</sup>, Claire O'Regan<sup>1</sup>, Hilary Cronin<sup>1</sup>, Rose Anne Kenny<sup>0</sup>

<sup>1</sup>Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Royal College of Surgeons in Ireland, Dublin, Ireland

**Introduction:** The phenotypic definition of frailty as described by Fried et al. is widely used, but elements of its measurement can be problematic. Timed Up-and-Go (TUG) is a simple measure of mobility that depends on different aspects of phenotypic frailty and so may be a simple proxy for frailty that has many advantages with respect to its measurement. Here we describe the distribution of frailty and TUG in the older population of Ireland, and the extent to which TUG identifies the frail and pre-frail populations.

**Methods:** 5,036 participants of The Irish Longitudinal Study on Ageing completed a comprehensive health assessment. Frailty was defined by having three or more of low gait speed, low grip strength, unintentional weight loss, self-reported exhaustion and low physical activity. ROC curves were used to identify to what extent TUG discriminates the frail and pre-frail populations, and whether TUG or normal walking speed could better identify frail individuals.

**Results:** Among the Irish population aged 50 and over 3.6 % are frail and 35.9 % are pre-frail. TUG identifies frail members of the population with a reasonable degree of accuracy (AUC = 0.86), but is less able to discriminate the non-frail from the pre-frail/frail populations (AUC = 0.68). TUG captures the components of frailty that become more common with age, but does not discriminate the components which do not: unintended weight loss or exhaustion. TUG performs better at identifying those with restrictions in activities of daily living than does a simple walking speed test, but walking speed is slightly better able to identify the frail.

**Discussion:** TUG is a sensitive and specific measure of frailty, and is a useful proxy for the age-related aspects of phenotypic frailty in situations where the application of the Fried criteria is impracticable.

## O18

### Physical Activity in Older People in Ireland and the Factors that Influence It

Gabrielle McKee<sup>1</sup>, Patricia Kearney<sup>2</sup>, Hilary Cronin<sup>1</sup>, Claire O'Regan<sup>1</sup>, George Savva<sup>1</sup>, Rose Anne Kenny<sup>1</sup>

<sup>1</sup>Trinity College Dublin, Dublin, Ireland, <sup>2</sup>University College Cork, Cork, Ireland

**Introduction:** Irish physical activity (PA) guidelines recommend on average 30 min a day of moderate intensity activity on 5 days a week for older people. Little is known about current levels of PA among older people in Ireland and the factors that influence it.

**Methods:** The Irish Longitudinal Study of Ageing (TILDA) is a large population representative sample of over 8,000 people aged 50 and over. Trained social interviewers administered a computer assisted personal interview which included questions on health, social and economic circumstances. Physical activity was measured using the International Physical Activity Questionnaire which records low, moderate and vigorous PA in minutes per day, and was converted to MET's per week. Linear multivariate regression analyses were used to determine the influence of 17 socio-demographic, health and other factors known to influence PA.

**Results:** The prevalence of low, medium and high physical activity in this population was 31.8, 34.4 and 33.7 % respectively, indicating that 31.8 % of older people did not meet the recommended PA guidelines. While the linear regression models examining the factors that influence PA were significant for all the age groups: 50–64 age group (F (16, 2,731) = 18.157, p < 0.000), the 65–75 age group (F (16, 1,229) = 8.99, p < 0.000) and the +75 age group (F (16, 503) = 6.622, p < 0.000), not all factors were significant in all of the

multivariate models. Chronic illnesses and depression were associated with lower PA, while grip strength and membership of a club were associated with greater PA across all age groups. Anxiety and age itself were also significant in the older age group, while gender, sitting and socioeconomic status were significant in the younger aged.

**Discussion:** Detailed interrogation of the factors that influence physical activity and how they change across age groups will assist in the creation of a supportive environment for healthy aging.

## O19

### An Exploratory Study of Older Persons Outdoor Mobility

Jamie Sheehy, Clare O'Sullivan

*PCCC Physiotherapy HSE South, Cork City, Ireland*

**Introduction:** Walking outdoors or community ambulation (CA) is a poorly studied activity despite being considered a prerequisite to independent living.<sup>1</sup> Physiotherapy research has largely investigated the activity from a quantitative and clinic based perspective. However, understanding barriers to outdoor walking in people with established mobility limitation could be a fundamental step in improving activity and health outcomes in frail older people. The objectives of this research were to qualitatively explore the lived experience of walking outdoors and to study the facilitators and barriers.

**Methods:** A qualitative phenomenological approach was used to explore in-depth outdoor walking experiences. In-depth semi-structured interviews were conducted with six urban and rural dwelling older people with self reported mobility limitation. Interviews were transcribed and analysed using hermeneutical analysis. Ethical approval was obtained. The emerging themes were subject to peer review.

**Results:** Four themes emerged from analysis of the data. Participants highlighted an awareness of their bodies, physical abilities and limitations. All accepted their limitations and were contented within their abilities. A wide variety of physical, built, interpersonal, social and geographical environmental challenges were reported as barriers to walking outside. No rural participants walked outside unassisted. Socially meaningful engagement and accessible transport were reported to facilitate outdoor walking and motivate older people 'to get out and about'. All participants illustrated complex planning and various strategies to cope with their limitations.

**Discussion:** This study highlights the relevance of identifying and treating community ambulation (CA) limitation. CA training should include more task specific i.e. physical, built environmental, climatic conditional and cognitive components. Physiotherapists should also routinely enquire about personal barriers and/or strategies used when walking outside when such a goal is identified in the rehabilitation process. Additional qualitative research is required to further study this topic with a larger sample of older adults.

## O20

### The Effect of a Balance Class on Patients Deemed at Risk of Falls

Helen T Fitzgerald, Elizabeth A Kelso

*St Luke's Hospital, Kilkenny, Ireland*

**Background:** The aim of the programme was to assess the effectiveness of a balance and education class on reducing the risk of

falling in an elderly population. Seniors with one or no risk factors will have approximately 27 % risk of falling each year. This increases to 78 % for those with 4 or more risk factors, which include: arthritis, muscle weakness, history of falls, gait deficit, balance deficit, use of assistive device, impaired activities of daily living, age >80. The programme was designed to reduce the risk of falling by addressing some of these risk factors.

**Methods:** The treatment consisted of six classes, including both exercise and education. Exercises were based on the Otago programme. The strengthening exercises focused on major lower limb muscles. Inclusion criteria specified for the class included: medically stable, Tinetti Score 19–26 inclusive, cognitively suitable for group participation. Those attending the class were given a written home exercise programme which they were requested to complete 4 times weekly. Education sessions were given by a pharmacist and an occupational therapist, and the physiotherapist gave a demonstration of getting up after a fall.

**Results:** Three outcome measures were selected, and were assessed pre and post the six classes: Tinetti performance orientated assessment of mobility; Timed up and go (TUAG); Fear of falling visual analogue scale (VAS). In 2010, 92 % patients improved on Tinetti, 95 % improved on TUAG and 37 % improved on VAS (n = 33). In 2011, 83 % patients improved on Tinetti, 66 % improved on TUAG and 50 % improved on VAS (n = 26).

**Discussion:** Balance can be improved in patients at risk of falls by a course of specific strengthening and balance exercises.

#### References:

Tinetti ME et al (1995) Risk factors for serious injury during falls by older persons in the community. *JAGS* 43:1214–1221. University of Otago (2003) Otago Exercise Programme.

## O21

### The Impact of Positive Affect on Falls and Fear of Falling in the Older Adult Population

Aisling O'Halloran, Rose Anne Kenny

*TILDA, Trinity College, Dublin, Ireland*

**Introduction:** Falling can have detrimental impacts both physically and psychologically on older people. Recent falls prevention guidelines from the American and British Geriatric Societies tend to minimise the psychological factors which contribute to falls risk. Previous studies have linked high positive affect to a reduced risk of stroke, myocardial infarction, mobility, disability, frailty and mortality. This study examined the impact of positive affect on falls and fear of falling.

**Methods:** Trained field workers administered a computer-assisted personal interview (CAPI) to 8,080 participants of The Irish Longitudinal Study on Ageing (TILDA), a population representative sample of community-dwelling people aged ≥50. Positive affect was measured using the CES-D. Falls history and frequency in the past year was self-reported. Fear of falling was measured by asking participants whether they were afraid of falling, and if they limited activity due to fear of falling.

**Results:** The prevalence of high positive affect, low positive affect and depressive symptoms was 67.3, 22.7 and 10.0 % respectively. Adjusting for age and gender, ≥1 falls in the past year was independently and negatively associated with high positive affect compared to those with low positive (OR = 0.76, 95 % CI: 0.66–0.89, p < 0.001) or depressive symptoms (OR = 0.51, 95 % CI: 0.42–0.61, p < 0.001). Similarly participants rated as highly positive reported significantly less fear of falling than their low positive (OR = 0.67, 95 % CI: 0.58–0.78, p < 0.001) or depressive

counterparts (OR = 0.31, 95 % CI: 0.25–0.38,  $p < 0.001$ ). They were also less likely to restrict activity due to fear of falling ( $p < 0.001$ ). High positive affect remained significantly and negatively associated with falls (OR = 0.61, 95 % CI: 0.46–0.79,  $p < 0.001$ ) among participants with and without fear of falling.

**Discussion:** The findings of this study indicate positive older people were less likely to have a history of falls, underlining the role of positive affect in resilience and successful ageing.

## O22

### Drug Adversity in Older Patients: Where's the HIPE?

Marie O'Connor, Keith McGrath, Denis O'Mahony, Paul Gallagher

*Department of Geriatric Medicine, Cork University Hospital, Cork, Ireland*

**Introduction:** Adverse drug events (ADEs) are a significant cause of morbidity and healthcare utilisation in older people. Recognition and documentation of ADEs is paramount; communication of known ADEs to the relevant healthcare providers is essential to prevent recurrent episodes. We aimed to determine if clinically significant ADEs occurring in hospitalized older patients are (a) captured by the Hospital In-Patient Enquiry (HIPE) coding system and (b) formally communicated to the patient's general practitioner in the hospital discharge summary.

**Methods:** 513 hospitalized patients aged  $\geq 65$  years were prospectively studied from admission to discharge; incident ADEs were identified by patient and physician consultation together with detailed case-note analysis. Causality was defined using WHO-UMC criteria. Discharge letters and HIPE data were subsequently analysed for patients with confirmed in-hospital ADEs.

**Results:** 513 patients were recruited (median (IQR) age 77 (72–82) years; 56 % female). Clinically significant in-hospital ADEs were identified in 135 patients (26 %); drug causality was certain or probable in 95 % of these. ADEs included acute kidney injury and significant electrolyte disturbance with diuretics ( $n = 45$ ), orthostasis/symptomatic bradycardia with anti-hypertensives ( $n = 30$ ) and falls secondary to benzodiazepines ( $n = 32$ ) and opiates ( $n = 32$ ). Discharge letters were obtained in 124 of 135 ADE cases (92 %) of which 24 (19 %) detailed the clinically significant in-hospital ADE. HIPE data was obtained for all 135 patients with ADEs; 27 HIPE records (20 %) included the ADE. Patients with ADEs had a longer hospital stay (median 12 days) than those without (median 7 days;  $p \leq 0.001$ ).

**Discussion:** Clinically significant ADEs are common in older hospitalized patients and are associated with increased length of stay. The majority of ADEs are not captured by HIPE coding and are not communicated to general practitioners. This omission increases the risk of repeat prescription of medications that caused a significant ADE.

## O23

### Persistence and Dose Escalation of Anti-dementia Medications

Linda Brewer<sup>1</sup>, Kathleen Bennett<sup>2</sup>, David Williams<sup>1</sup>

<sup>1</sup>*Department of Stroke and Geriatric Medicine, Royal College of Surgeons of Ireland, Dublin, Ireland,* <sup>2</sup>*Department of Pharmacology and Therapeutics, Trinity Centre for Health Sciences, Dublin, Ireland*

**Introduction:** Anti-dementia (AD) medications are widely used with studies reporting improvements in cognitive scores, function and behaviour. However, low persistence and inappropriate dose-titration may affect outcomes. This study examines persistence and dose-titration of AD medications in the 'real world' setting.

**Methods:** The Irish Health Service Executive (HSE) Primary Care Reimbursement Services (PCRS) pharmacy database was used to define a retrospective cohort (2007–2010) of those aged  $\geq 70$  years. Non-persistence was defined by a refill gap of  $>63$  days at 6 months. Logistic regression was used to examine predictors of persistence at 6 months. Odds ratios (OR) and 95 % confidence intervals (CIs) are presented. The rate of dose-maximisation over time was also examined.

**Results:** During this period, 15,549 patients (with  $\geq 6$  months follow-up) initiated AD medications. Donepezil and memantine were the most commonly prescribed ( $n = 13,781$ , 88.6 %). Persistence with therapy was 69 % at 6 months. Older age (75+ vs. 70–74 years; OR = 0.84, 95 % CI 0.75, 0.93) and the prescription of rivastigmine (compared to donepezil; OR = 0.85, 95 % CI 0.75, 0.97) was associated with lower persistence. Persistence was higher following more recent drug initiation (2010 vs. 2007; OR = 1.23, 95 % CI 1.1, 1.38). Most patients on donepezil achieved the maximum dose of 10 mg daily (9,634, 86 %), but only two-thirds for at least 2 consecutive months (7,305, 65.2 %). Similarly for memantine, maximum dose (20 mg) was achieved in the majority (4,941, 89.7 %), but maintained for at least two consecutive months in 69.8 % of cases.

**Discussion:** This study gives first insights into dosing trends of AD medications outside the clinical trial setting. Despite most being prescribed maximum doses of donepezil and memantine, only two-thirds maintained this dose for at least 2 consecutive months. Persistence with medication was relatively low. As part of the Irish National Dementia Strategy (2013) there is scope to introduce clearer national guidance on optimising the prescribing of AD medications in future dementia care.

## O24

### Prevention of Adverse Drug Events in Hospitalised Older Patients: A Randomised controlled Trial

Marie O'Connor<sup>1</sup>, David O'Sullivan<sup>2</sup>, Paul Gallagher<sup>1</sup>, Stephen Byrne<sup>2</sup>, Joseph Eustace<sup>3</sup>, Denis O'Mahony<sup>1</sup>

<sup>1</sup>*Department of Geriatric Medicine, Cork University Hospital, Ireland,* <sup>2</sup>*School of Pharmacy, University College Cork, Ireland,* <sup>3</sup>*Health Research Board Clinical Research Facility, Mercy University Hospital, Cork, Ireland*

**Introduction:** Adverse drug events (ADEs) are a major cause of morbidity and healthcare utilisation in older people. Inappropriate prescribing (IP) is an established risk factor for ADEs and one that can be modified by physician intervention. To date, no studies have demonstrated that prospective application of screening tools for IP to older patients' prescriptions can reduce ADEs.

**Methods:** We randomised 732 hospitalized patients aged  $\geq 65$  years to receive either the usual pharmaceutical care (control;  $n = 372$ ) or screening with STOPP/START criteria on admission, followed up with written recommendations to their attending physician (intervention;  $n = 360$ ). ADEs were identified by patient and physician



consultation together with case-note analysis prior to their discharge. The trial was registered with a clinical trials registry and ethical approval was granted.

**Results:** Demographics, co-morbidities and medication use were similar in both groups on admission [median IQR age 79 (73–85); median medications 9 (6–11) in the intervention group and median (IQR) age 78 (72–84); median medications 8 (5–11) in the control group]. An interventional recommendation was made to the attending physician of 282 (76 %) patients concerning 145 and 137 instances of potentially inappropriate prescribing identified by STOPP and START respectively. 102 ADEs were recorded in the study population: 36 (10 %) in the intervention group and 66 (18 %) in the control group; absolute risk reduction 8 % and relative risk reduction 44 %. The number of prescriptions that would need to be screened to prevent one ADE was 13. The intervention group had a shorter hospital stay compared to the control group: 10 versus 13 days,  $p \leq 0.001$ .

**Discussion:** This randomised controlled trial demonstrates that prospective screening of older persons' prescriptions on admission to hospital with the IP tool STOPP/START can significantly reduce in-hospital ADE incidence.

## O25

### Adverse Drug Reactions During Hospitalisation: Can They Be Predicted on Arrival to the Emergency Department?

Marie O'Connor<sup>1</sup>, Paul Gallagher<sup>1</sup>, Denis O'Mahony<sup>1</sup>

<sup>1</sup>Department of Geriatric Medicine, Cork University Hospital, Cork, Ireland, <sup>2</sup>School of Medicine, University College Cork, Cork, Ireland

**Introduction:** Reducing avoidable patient harms is a key focus for healthcare providers. Adverse drug reactions (ADRs) are an example of an “avoidable harm” and are a major cause of morbidity and healthcare utilization in older people. We aimed to determine the incidence of ADRs in older people during hospitalization and identify what variables influenced ADR likelihood.

**Methods:** 513 acutely ill patients aged  $\geq 65$  years were prospectively studied. Admission data included co-morbid illnesses, medications, functional status, laboratory and radiological investigations and application of the GerontoNet ADR risk score. Patients were reviewed on day 5 and day 10 to detect ADRs by patient and physician consultation and case-note analysis. Receiver operator characteristic (ROC) curves were constructed to test the predictive ability of the GerontoNet score. Multivariate logistic regression examined the influence of individual variables on the presence of ADRs.

**Results:** ADRs were identified in 135 patients (26 %). The area under the ROC curve for GerontoNet ADR prediction was 0.62 (95 % CI 0.57–0.68). Variables which increased ADR risk included (i) renal failure (OR 1.81, 95 % CI 1.12–2.92), (ii) increasing number of medications (OR 1.09, 95 % CI 1.02–1.17), (iv) age  $\geq 75$  years (OR 2.12, 95 % CI 1.23–3.70) and (iii) inappropriate medications (OR 2.40, 95 % CI 1.26–4.50). The most prevalent ADRs and culprit medications were (i) acute kidney injury and electrolyte disturbance with diuretics, (ii) falls with benzodiazepines, (iii) acute confusion/sedation/falls with opiates, (iv) acute kidney injury/peptic ulcer disease with NSAIDs and (v) symptomatic bradycardia and orthostasis with beta-blockers.

**Discussion:** One in four older people had an ADR during hospitalisation. The GerontoNet ADR risk score had poor predictive value for ADRs in this study population. Increasing age, numbers of medications, and inappropriate prescribing contributed significantly to

ADR risk; such variables should be considered when prescribing for older patients.

## O26

### A Population-based Comparison of Total Costs: The Economic Burden of Atrial Fibrillation-Associated Stroke

Niamh Hannon<sup>1</sup>, Samantha Smith<sup>2</sup>, Sean Murphy<sup>1</sup>, Danielle Ní Chróinín<sup>1</sup>, Elizabeth Callaly<sup>1</sup>, Michael Marnane<sup>1</sup>, Áine Merwick<sup>1</sup>, Órla Sheehan<sup>1</sup>, Joseph Duggan<sup>1</sup>, Lorraine Kyne<sup>1</sup>, Eamon Dolan<sup>3</sup>, Alan Moore<sup>4</sup>, Peter J Kelly<sup>1</sup>

<sup>1</sup>Mater Misericordiae University Hospital, Dublin, Ireland,

<sup>2</sup>Economic and Social Research Institute, Dublin, Ireland, <sup>3</sup>Connolly Hospital, Dublin, Ireland, <sup>4</sup>Beaumont Hospital, Dublin, Ireland

**Introduction:** Accurate health economics data is essential for service planning and clinical guideline development. Stroke associated with atrial fibrillation (AF) is more severe and disabling than non-AF stroke. Little data exists on economic impact of AF-stroke compared to non-AF-stroke in population-based samples.

**Methods:** The North Dublin Population Stroke Study is a population-based prospective study of incident stroke. Both direct (healthcare-related) and indirect costs were calculated over a 2-year post-stroke period for individual patients, using data for survival and disability, discharge destination, outpatient and family practitioner visits, community supports, and on-going treatment. Acute inpatient care was costed using the casemix approach, measuring resource use per hospitalization. Length of stay was used to cost rehabilitation and nursing home admissions. Indirect costs of illness were calculated using in-hospital length of stay to determine loss of productivity. Total costs were compared for AF-stroke and non-AF stroke (2007 prices).

**Results:** of 568 ischemic and haemorrhagic incident stroke patients, 31 % (177) had AF-associated stroke. 2-year fatality was higher in AF-stroke patients (50.3 vs. 35.1 %,  $p = 0.001$ ). Total 2-year median cost was €27,124 for AF-stroke patients (25–75 % IQR €10,967–67,372) compared to median cost of €14,601 (IQR €10,401–39,086) in non-AF stroke patients ( $p < 0.001$ ). Inpatient care contributed 47 % of total costs: cost per AF-stroke patient (index stroke) was median €10,967 (IQR €7,912–31,530) compared to median €8,172 for non-AF stroke (IQR €7,294–20,185),  $p = 0.002$ . Long-term institutional care after AF-stroke was the second highest cost contributor: 2-year mean cost €18,459 ( $\pm$ standard deviation [SD] €52,758) versus non-AF-stroke: mean €9,991 ( $\pm$ SD €39,662),  $p = 0.002$ . Community supports, specialized equipment, and repeat hospital admission costs were non-significantly higher in patients with AF-stroke.

**Discussion:** AF-associated stroke was associated with substantially higher costs for hospitalisation and after discharge. With ageing populations and increasing stroke burden, AF-stroke is likely to account for an increasing proportion of overall cost to health services.

## O27

### Co-morbidity and Outcome in Stroke Patients Compared to Other Emergency Medical Admissions

Karl Boyle, Elizabeth Callaly, Declan Byrne, Joseph Harbison, Bernard Silke

*St James's Hospital, Dublin, Ireland*

**Background:** Stroke frequently develops in older subjects and frequently as a consequence or in association with other diseases. Accordingly the level of co-morbidity amongst stroke patients is high which can add to their complexity of care. St James's Hospital runs a model of Organised Stroke Care based on an Acute Medical Admissions Unit. We compared levels of co-morbidity found in stroke patients with those of other medical patients admitted to a large University Teaching Hospital over a 6 year period.

**Methods:** All emergency admissions to the hospital are coded according to discharge diagnoses according to ICD 9 and ICD 10 classifications. Charlson Co-morbidity Indices (CCI) were calculated for each subject and dichotomised as 0, 1 or 2+. Subjects with another Major Diagnostic Class (MDC) condition on admission were identified and recorded.

**Results:** 20,853 patients were admitted as emergencies between 1st January 2005 and 31st December 2010 of whom 1,150 (5.5 %) were stroke patients. There was no significant difference in gender mix (Male Stroke 46.2 %, Male non-stroke 48.2 %.  $p = 0.18$ ) but stroke patients were significantly older (Mean Age 70.2 vs. 55.7 years  $p < 0.0001$ ). Stroke patients had significantly more co-morbidities (CCI-0: 0 vs. 57.8 %, CCI-1: 56.6 vs. 24.3 %, CCI-2 + 43.4 % vs. 17.9 %.  $p < 0.0001$  ANOVA) and significantly more additional MDCs (Respiratory 6.7 vs. 1.1 %, Cardiac 6.4 vs. 1.3 %, Gastrointestinal 6.1 vs. 0.4 %). Over the 6 years 30-day mortality was higher amongst stroke patients (20.1 vs. 7.2 %.  $p < 0.0001$ ) although stroke mortality dropped to 11.1 % with introduction of progressive levels of organised care.

**Discussion:** Stroke patients admitted are more far more medically complex than other patients admitted as emergencies to hospital. Managing and addressing co-morbidities and consequent medical complications may be a means by which Acute Stroke Unit care improves outcome.

## O28

### Age-Specific Risk and Severity of Bleeding on Aspirin-based Secondary Prevention: A Population-Based Study

OC Geraghty, Z Mehta, PM Rothwell

*Stroke Prevention research Unit, Department of clinical neuroscience, University of Oxford, Oxford, UK*

**Introduction:** Use of aspirin in secondary prevention after TIA, ischaemic stroke, and acute coronary syndromes (ACS), is based on trials done over 30 years ago, mainly in patients aged <70 years. Most patients with incident ischaemic events are now aged over 70 years. There are no reliable population-based data on absolute risks, or on whether severity of bleeds also increases with age.

**Methods:** We prospectively determined rates and outcome (mortality and disability) of all bleeding events that presented to medical attention during follow-up in all patients on aspirin-based antiplatelet treatment after TIA, stroke or ACS in the Oxford Vascular Study from 2002 to 2009.

**Results:** Of 2,043 patients on antiplatelet, ( $^{1,946}_{2,043}$ , 95 % aspirin-based) treatment (1,257 stroke/TIA; 786 ACS), 741 (36 %) were aged <70 years and 1,302 (64 %)  $\geq 70$  years. 249 (12.2 %) first bleeding events required medical attention during follow-up, with annual rates of major bleeding (CURE trial definition) of 1.04 % (95 % CI 0.67–1.54) at age <70 and 3.82 % (3.14–4.62) at age  $\geq 70$ . Only one bleed was fatal

in patients <70 years old (an extra-cranial bleed), whereas there were 8 fatal bleeds (5 ICH and 3 extra-cranial) in patients aged  $\geq 70$ . Disabling or fatal ICH was also more common at age  $\geq 70$  years (13 vs. 2) and new disability due to extra-cranial (mainly gastrointestinal) haemorrhages was substantially more frequent in the older age group (39 vs. 0 events,  $p = 0.001$ ). The annual rate of death or new disability due to haemorrhage was 0.12 % (0.03–0.36) at age <70 years versus 1.82 % (1.36–2.38) at age  $\geq 70$  years ( $p < 0.0001$ ).

**Discussion:** Risk of bleeding on aspirin-based antiplatelet treatment increases steeply with age and bleed-related death and disability are common at age  $\geq 70$  years. Randomised trials may be justified to compare different antiplatelet regimens and the use of upper-gastrointestinal protection in elderly patients.

## O29

### Patient Beliefs About the Efficacy of Medications Used for Secondary Prevention in Stroke

Rebecca Geary<sup>1</sup>, Racheal Mulpeter<sup>1</sup>, Joe Harbison<sup>1</sup>, Jaspreet Bhangu<sup>2</sup>

<sup>1</sup>Trinity College, Dublin, Ireland, <sup>2</sup>St James's Hospital, Dublin, Ireland

**Introduction:** Anti-hypertensives, statins and anti-platelets (aspirin) form the pillar of secondary prevention of stroke but show only modest benefits in terms of stroke prevention in research trials. The aim of our study is to determine whether elderly patients' opinions about their stroke preventative medication correlates to what the research has shown. Furthermore we aim to test the hypothesis that patients overestimate the efficacy of their stroke prevention medication.

**Methods:** Information was obtained from patients (>65 years of age) using a researcher-administered questionnaire in an out-patient setting. Data was analysed using the Statistical Package for the Social Sciences (SPSS). Results were reported as percentages and means. Chi square tests were used to calculate p values. A p value of <0.05 was seen as statistically significant.

**Results:** A total of 84 patients were interviewed (31 male; 53 female). 33 subjects (39 %) had a stroke or Transient Ischemic Attack (TIA) of whom 21 (64 %) reported receiving Aspirin, 26 (79 %) were receiving a statin and 21 (64 %) were taking an antihypertensive. Patients who had previously suffered a stroke/TIA ( $n = 33$ ) overestimated the protective effect of their stroke medication. 67 % of those on aspirin believed there was little or no chance of having a recurrent stroke with 69 and 81 % for statins and anti-hypertensives respectively.

**Discussion:** Despite the current research on the benefit of secondary medication for stroke, patients seem to have an unrealistic view of the effectiveness of their medications. It appears that for each class of preventative medication they overestimate the level of benefit associated with them when compared to the research. This suggests that more time should be spent explaining to elderly patients just how effective these medications are in reducing their chance of having another stroke in order to elicit their willingness to adhere to such drug regimes.

## O30

### Symptomatic Orthostatic Hypotension is Ssassociated with Subjective Memory Complaints in a Sample of Community Dwelling Older Adults

Celia O'Hare, Brian Lawlor, Rose Anne Kenny

TRIL (Technology Research for Independent Living), Dublin, Ireland

**Introduction:** Growing evidence suggests a link between orthostatic blood pressure changes and cognitive function. Orthostatic hypotension (OH) is common in older adults and transient cerebral hypoperfusion resulting from OH may cause cerebral white matter hyperintensities (WMH). Subjective memory complaints (SMC) remain at the centre of debate as to whether or not they represent a potential early marker of future cognitive decline given overlap with symptoms of depression, anxiety and personality traits. Neuroimaging studies have, however, demonstrated a greater number of cerebral WMH on MRI in those with SMC than in those without. We thus aimed to investigate a potential association between OH and SMC in older adults through exploration of the biological and psychological correlates of symptomatic OH in a group of community dwelling older adults.

**Methods:** 624 community dwelling participants (age range 60–95) attended the TRIL Clinic and had a full bio-psycho-social assessment encompassing Mini-Mental State Examination (MMSE), screening for SMC using the Cognitive Failures Questionnaire (CFQ) and measurement of orthostatic phasic blood pressure changes.

**Results:** 426 participants were free from dementia (MMSE >23) and were found to have OH on the basis of 20 mmHg drop in systolic blood pressure upon standing. Those expressing symptoms of OH were significantly older ( $p = 0.026$ ), with significantly higher levels of SMC ( $p = 0.01$ ). A logistic regression model, which included measures of potential psychological confounders, found that in addition to changes in systolic blood pressure upon orthostasis and polypharmacy, SMC were significantly associated with symptomatic OH ( $p < 0.01$ ).

**Discussion:** Our study suggests a novel link between symptomatic OH and SMC in community dwelling older adults while controlling for potential psychological confounders including anxiety, depression and personality traits. If this relationship between OH and SMC were to be confirmed in future studies, symptomatic OH may represent a potential modifiable risk factor for subjective cognitive dysfunction in the elderly.

## O31

### Hypotensive Events Induce Stroke, Particularly in the Older Person

Daniel Ryan<sup>1</sup>, Soren Christensen<sup>2</sup>, James Meaney<sup>1</sup>, Andrew Fagan<sup>1</sup>, Roseanne Kenny<sup>1</sup>, Joseph Harbison<sup>1</sup>

<sup>1</sup>St. James's Hospital, Dublin, Ireland, <sup>2</sup>Brain Imaging Laboratory, Melbourne, Australia

**Introduction:** Hypotensive strokes frequently occur in the context of carotid disease. In those with normal carotids, however, the literature denies the occurrence of hypotension-induced stroke. We sought to investigate whether this was the case.

**Methods:** Over a 20 month period, all acute strokes underwent prospective screening for presence of pre-syncope or syncope at stroke onset. All with severe carotid stenosis were excluded. Suitable patients were referred to a syncope unit for investigation. All underwent 1.5T MRI acutely while those with suspected border zone infarction (BZI) underwent repeat 3T MRI with perfusion imaging to confirm BZI.

**Results:** During a 20 month period, 456 acute stroke patients presented to St. James's Hospital, Dublin. Of these, 22 exhibited pre-syncope or syncope at stroke onset and had normal intracranial and

extra-cranial vessels (4.8 % of all strokes). The mean age was 74 years, 70 % were female ( $n = 14$ ). 68 % of patients described a TIA rather than a stroke. All reported hypotensive symptoms for a mean 3.8 years and were diagnosed with a hypotensive disorder. Vasovagal syncope was diagnosed in 64 % ( $n = 14$ ) of patients through symptom reproduction on head-up tilt. Sustained orthostatic hypotension was present in 23 % ( $n = 5$ ) and cardiac syncope in 14 % ( $n = 3$ ). 55 % ( $n = 12$ ) of patients exhibited an acute infarct. Two-thirds of these infarcts were in the border zone region ( $n = 8$  of 12), suggesting hypotensive event played a causal role. Those that developed BZI were significantly older than those that did not (80 years in BZI group vs. 70 years no BZI,  $p$  value = 0.01). The active stand nadir occurred within 15 s in 82 % of patients and thus would have been missed by standard sphygmomanometer assessment.

**Discussion:** Hypotension potentiates stroke, even in those without carotid disease. Older people are particularly vulnerable. This group are clinically identifiable and have a hypotensive disorder. Overzealous antihypertensive therapy in this group is ill-advised.

## O32

### Intra-Arterial Treatment with Thrombectomy Devices, Stenting and Thrombolysis for the Treatment of Acute Ischaemic Stroke: A Case Series 2010–2011

Stephanie Robinson<sup>1</sup>, Sarah Power<sup>1</sup>, Eline Appelmans<sup>1</sup>, Eamon Dolan<sup>3</sup>, Ciaran Donegan<sup>1</sup>, Alan Moore<sup>1</sup>, Sean Murphy<sup>2</sup>, Paul Brennan<sup>1</sup>, John Thornton<sup>1</sup>, David Williams<sup>1</sup>

<sup>1</sup>Beaumont Hospital, Dublin, Ireland, <sup>2</sup>Mater Hospital, Dublin, Ireland, <sup>3</sup>Connolly Hospital, Dublin, Ireland, <sup>4</sup>Royal College of Surgeons in Ireland, Dublin, Ireland

**Introduction:** This case series aims to illustrate the experience of an Irish teaching hospital following the introduction of a 24/7 combined intravenous/intra-arterial approach to the management of acute ischaemic stroke. Many early presenting patients with a large vessel occlusion will have a poor response to intravenous thrombolysis. A further subgroup will have contraindications to systemic treatment. We perform a CT angiogram in patients presenting within the thrombolytic window to identify those with large vessel occlusions.

**Methods:** All patients presenting from January 2010 to December 2011 were included. We reviewed baseline patient demographics and presenting neurological status by National Institute of Health Stroke Scale (NIHSS). Intra-procedurally, the location of large vessel occlusion, thrombectomy device, number of passes, use of alteplase, and degree of vessel recanalisation were recorded. Mortality, functional outcome by modified Rankin score (mRS) and complication rates were recorded.

**Results:** A retrospective review was carried out on 26 (M 15: F 11) consecutive cases treated with an intra-arterial approach. Pre-morbid modified Rankin score was 0 in 25 patients.

The average patient age was 58.2 (range 26–81) years and NIHSS at presentation was 15.6 (range 6–27). Intravenous thrombolysis was initially administered to 73 % ( $n = 19$ ). Successful reperfusion with vessel recanalisation was achieved in 78 % ( $n = 22$ ). Failed vessel recanalisation occurred in 14 % ( $n = 4$ ). Treatment approach included mechanical thrombectomy, clot disruption, intra-arterial thrombolysis and carotid stenting. mRS 0–2 was considered a favourable outcome and was achieved in 62 % of patients ( $n = 16$ ) at 30 day follow up. The 30-day mortality rate was 22 % ( $n = 4$ ).

Symptomatic haemorrhage occurred in 15 % ( $n = 4$ ). Other complications included embolisation into a previously uninvolved territory ( $n = 5$ ) and groin pseudo-aneurysm ( $n = 1$ ).

**Discussion:** Our experience to date illustrates that patients who have early successful revascularisation have a favourable outcome. Consideration for additional intra-arterial therapy for acute ischaemic stroke is reliant on the provision of emergency CT angiography in acute stroke centres and access to neuro-interventional expertise.

### O33

#### Publicly Funded Home Care for Older People in Ireland: Determinants of Utilisation and Policy Implications

Catríona Murphy<sup>1</sup>, Brendan Whelan<sup>2</sup>, Charles Normand<sup>2</sup>

<sup>1</sup>Dublin City University, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland

**Background:** The majority of older people are independent and self caring. When long-term care is required this is provided across a range of community and residential settings including the older person's own home. Policy direction and the preference of older people are directed towards supporting older people to remain living in their homes for as long as possible. The majority of home care is provided informally by unpaid carers with a smaller proportion provided formally by paid carers. Formal care is predominantly publicly financed but may be delivered by public, private and not-for-profit organisations. The aim of this study was to identify the determinants of formal home care utilisation amongst community living older people in Ireland.

**Methods:** The study was cross-sectional in design using data from The Irish Longitudinal Study on Ageing (TILDA). Respondents were interviewed between 2009 and 2011; the response rate was 62 %. The behavioural model of health service utilisation provided a framework for the analysis (Aday and Andersen, 1974).

**Results:** Multivariable logistic regression revealed a wide range of factors which predict service utilisation. The strongest determinant of formal home care utilisation was self-reported difficulty with instrumental activities of daily living, followed by older age and living alone.

**Discussion:** The research provides a population based profile of the characteristics of older adults utilising formal home care services provided by the State. Policy implications include the need for a whole system perspective including standardised access and assessment procedures across the system and a shift in orientation away from domestic care towards greater provision of personal care at home. This study identifies a need to consider home care utilisation in older adults who self-report no limitations in either activities of daily living (ADL) or instrumental activities of daily living (IADL) when modelling the demand for home care in the future.

### O34

#### The Impact of Being the Intermediate Caring Generation on Self-Reported Health of Older Women in Ireland: Analysis of the Irish Longitudinal Study of Ageing (TILDA 2010)

Christine A McGarrigle, Hilary Cronin, Rose Anne Kenny

TILDA, Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland

**Introduction:** Previous studies in the United States and Europe have shown that women, being the intermediate between elderly parents and young adult children have borne the burden of care for both generations. This paper will investigate what is associated with being in this “sandwich generation” in older women in Ireland, and how this affects health and mental well-being.

**Methods:** The Irish Longitudinal Study of Ageing (TILDA) 2010 is a stratified probability sample survey of 8,504 men and women aged over 50 resident in Ireland, 3,196 of whom were women aged 50–69 years. Demographic and health variables associated with intergenerational transfers, both financial and non-financial, were investigated. To determine whether transfers were associated with self-related health variables when controlling for other socio-demographic variables, a logistic regression model comparing givers with non-givers was created.

**Results:** 31 % of women had both living parents and children. Being in the “sandwich-generation” was associated with younger age, marriage, employment, higher educational achievement and more children at home. In this sandwich-generation, 90.4 % (95 % CI 88.1–92.3) gave help to either parents or children; 70.6 % (95 % CI 67.2–73.7 %) financial and 74.7 % (95 % CI 71.7–77.5 %) non-financial. In univariate analysis, women who gave help were less likely to report poor health compared to non-givers (OR = 0.32  $p < 0.001$ ). This varied by type of help: women giving financial help were less likely to report poor health (OR 0.44  $p < 0.001$ ) or depression (OR 0.61  $p = 0.01$ ) while women providing childcare to grandchildren were more likely to report depression (OR 1.51  $p = 0.03$ ).

**Discussion:** The proportion of women who are caring for both elderly parents and dependent children is substantial. While caring for two generations is both financially draining and time-consuming, the relationship between giving and both self-reported health and mental health is complex and is associated with employment status and education.

### O35

#### Here Today Gone Tomorrow? The Development of Housing with Care for People with Dementia in Ireland

Janet Convery

Trinity College Dublin, Dublin, Ireland

**Introduction:** This presentation uses the findings from a PhD qualitative research study to explore the factors that influenced the development of housing with care services for people with dementia in Ireland. A case study approach was used and a total of 45 in-depth interviews were undertaken with key stakeholders who were either directly involved in the development of five voluntary housing with care schemes in Ireland or had an interest in the topic.

**Methods:** Change implementation theory was used as the framework for the analysis of the findings. The case study schemes represent the introduction of a dramatic change in the Irish context where nursing home care is the only practical option for older people whose needs cannot be met at home and nursing care continues to be perceived as a requisite to the long term care of older people, particularly for people with dementia. The focus of the interviews was on what made the



case study scheme developments possible and what challenges had to be addressed in order to implement development plans.

**Results:** The findings suggest the critical role played by individual champions in both the housing and health sectors who believed that the case study schemes would solve problems for both older people and for their respective agencies. However, the evidence also shows that the schemes were developed on shaky foundations at best: resistance to the schemes surfaced soon after they were built; revenue funding had to be cobbled together from a number of sources at commissioning stage; and systems, structures and processes in the health and housing sector had to be circumvented in order to progress plans. Inadequacies in the planning process are obvious from the findings and future service development seems very uncertain.

### O36

#### **The Community Assessment of Risk Tool, (CART): Investigation of Inter-Rater Reliability for a New Instrument Measuring Risk of Adverse Outcomes in Community Dwelling Older Adults**

Ronan O Caoimh<sup>1</sup>, Elizabeth Healy<sup>2</sup>, Elizabeth O Connell<sup>3</sup>, Yang Gao<sup>1</sup>, D William Molloy<sup>1</sup>

<sup>1</sup>Centre for Gerontology & Rehabilitation, St. Finbarr's Hospital, Cork, Ireland, <sup>2</sup>Ballincollig & Viaduct Public Health Centre, Cork, Ireland, <sup>3</sup>Mahon & Ballintemple Public Health Centre, Cork, Ireland

**Introduction:** The Community Assessment of Risk Tool, (CART) is a recently developed instrument measuring and stratifying risk of three adverse outcomes, among community dwelling older adults: institutionalisation, hospitalisation and death. The CART scores three domains: mental state, activities of daily living and medical state, stratifying individuals into low, medium and high risk, based on risk severity and the protective effect of the caregiver network. The instrument was developed in conjunction with public health nurses (PHNs) but can be used by other healthcare workers. The study's aim was to investigate if a diverse sample of healthcare professionals, trained and untrained, from different countries can reliably score the CART.

**Methods:** The CART was scored by multiple raters including PHNs, GPs, registered nurses and physicians from Ireland and Canada. The majority were untrained. Three standardised cases, low (case 1), medium (case 2) and high risk (case 3), were presented. Raters, blind to the diagnosis, were asked to score the CART (six subsections and overall score for institutionalisation, hospitalisation and death), for each case. Internal consistency was determined with Cronbach's alpha coefficient ( $\alpha$ ). Inter-rater reliability (IRR) was determined using Fleiss' Kappa (K).

**Results:** 115 healthcare workers participated. Ten, missing data, were excluded. Cronbach's alpha showed excellent internal consistency for the CART subsections,  $\alpha = 0.94$ . Trained PHNs ( $n = 7$ ) reliably predicted risk of institutionalisation with almost perfect agreement,  $K = 0.86$ . IRR was perfect for predicting risk of hospitalisation,  $K = 1$ . Agreement was slight for risk of death,  $K = 0.14$ , sub-analysis showing reliability was skewed by the medium case. Untrained raters (Canada,  $n = 68$ ) had lower IRR for each outcome with risk for institutionalisation, ( $K = 0.54$ ), hospitalisation, ( $K = 0.52$ ) and death, ( $K = 0.52$ ) reaching moderate agreement. Untrained Irish raters scored similar to Canadian.

**Discussion:** Internal consistency and IRR for the CART was excellent. Reliability was lower for the intermediate risk scenario. CART

training increases IRR, suggesting that it is the tool rather than the cases alone that determines the risk rating.

### O37

#### **Loneliness and Isolation Among Community Based Older Adults: Is There an Association with Age Friendliness?**

Yohana Skeet, Aoife Bailey, Elaine Crosby, Patricia Greville, Amina Jaji, Ann O'Hanlon, Catherine McConville

Netwell Centre, Dundalk Institute of Technology, Dundalk, Ireland

**Introduction:** Loneliness and isolation are pressing global issues impacting adversely on psychosocial health and well-being. Loneliness has been described as unpleasant and distressing (Peplau and Perlman, 1982), aversive and undesirable (Ceçen, 2007), and indeed the social equivalent of physical pain (Hawkey and Cacioppo, 2010). The current study sought to examine levels of loneliness and isolation among community-based adults, and to assess their relationship to age friendliness, i.e. community factors that can support (or impede) quality of life and well-being.

**Methods:** Community based adults aged 50+ years were recruited from the north east coast of Ireland using a range of methods including social groups and personal contacts ( $n = 110$ ). Measures of isolation included 'Sense of Community Connectivity or Belonging Scale', and the 'General Isolation Scale' which asks participants to rate how isolated they felt on a five point scale. Measures for age friendliness were developed from focus groups and a literature review on each of eight themes from a World Health Organization study on age friendliness (WHO 2006).

**Results:** Results indicated around a third of the sample experienced loneliness and/or isolation. Women were more likely than men to experience isolation ( $p = 0.05$ ), as were those in poorer physical health ( $n = 0.005$ ). Perceptions of isolation were related to psychosocial well-being, but not to key age-friendly themes including quality of access to health services, level of connectivity within the community, and information isolation or the availability of information. Use of a taxi was associated with higher levels of loneliness.

**Discussion:** Levels of isolation and loneliness can remain high despite much effort being spent on community interventions for older people, including better transport options to functions and events. Such community initiatives are necessary and valuable, but need to be accompanied by psychosocial interventions that promote empowerment and creativity in problem solving.

### O38

#### **Measuring the Pain: Loneliness Among Midlife and Older Adults**

Catherine McConville, John McEvoy, Ann O'Hanlon, Rodd Bond

Dundalk Institute of Technology, Dundalk, Co. Louth, Ireland

**Introduction:** Loneliness has been described as the social form of pain, hunger and thirst (Cacioppo 2006). It is a major concern among community based older adults and is a predictor of morbidity and mortality. The two studies described explore and examine levels of loneliness among community based older adults. Drawing on

Gatchel's model of developmental pain chronicity (Gatchel 1991, 1996), two studies are reported. Study One used focus groups to explore the meaning and experience of loneliness, with Study Two extending the focus group data to develop possible items for a new scale, the Loneliness Evaluation Scale. Themes from the focus groups included the identification of specific life events as predictors of loneliness, the detrimental effects that the condition can have on individual functioning and self care and the importance of meaningful social contact as a preventative tool. Study Two sought to develop a new measure of loneliness. An initial forty item scale was developed, based on focus group data with 100 surveys completed. A twelve item scale was subsequently developed with three main themes, social isolation, wishfulness and solitude. Findings indicated that the new scale had very good psychometric properties including acceptable Cronbach's alpha and good relationships with other scales in the expected directions. Additionally, the scale is short, and easy for participants to read and professionals to score.

**Discussion:** Loneliness among older adults is a major health and psychosocial concern which requires further exploration, particularly in the context of an ageing population. The Loneliness Evaluation scale is a short but robust tool that can be used both by General Practitioners and others to assess levels of loneliness amongst community based adults.

### O39

#### Predictors of Cognitive Reserve in Healthy Ageing

David Delany<sup>1</sup>, Lorraine Boran<sup>2</sup>, Sean McCarthy<sup>3</sup>, Angela Stewart<sup>3</sup>

<sup>1</sup>Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Dublin City University, Dublin, Ireland, <sup>3</sup>Waterford Institute of Technology, Waterford, Ireland

**Introduction:** Cognitive reserve (CR) refers to the observation that individuals with higher levels of education and occupational attainment, or participation in leisure activities appear to be buffered against cognitive decline despite potentially exhibiting extensive neuropathology. In other words CR describes how early life experiences modulate the relationship between the degree of neurodegeneration associated with, for example, incipient Alzheimer's disease, and the actual neurocognitive clinical manifestations of the disease. We sought to examine the relationship between three predictors: age, education, fluid IQ, and cognitive reserve in a sample of healthy adults.

**Methods:** A total of 70 healthy adults (43 males), with an age range of 18–41 years in the young group (mean 26.29 years, MSE 1.21) and 42–82 years in the senior group (mean 58.44 years, MSE 1.63) completed two standardised measures of cognitive reserve (Nucci et al. 2011; Solé-Padullés et al., 2009) and an adapted measure of fluid IQ (Raven's Progressive Matrices).

**Results:** Stepwise multiple regression analyses with age, education and fluid IQ as predictors, and cognitive reserve as an outcome variable revealed that age alone was a significant predictor of reserve in the Nucci questionnaire (Beta = 0.71,  $t = 8.29$ ,  $p < 0.001$ ). In contrast, education was the only significant predictor of reserve in the Solé-Padullés questionnaire (Beta = 0.458,  $t = 4.25$ ,  $p < 0.001$ ). Controlling for age and education, both measures of reserve were significantly correlated ( $r = 0.39$ ,  $p < 0.001$ , 2-tailed).

**Discussion:** Age and educational attainment were differentially correlated with each of the two standardised measures of cognitive

reserve, while fluid IQ failed to predict reserve. These findings have implications for predicting cognitive reserve, and using measures of reserve in gauging an individual's risk of developing cognitive impairment.

### O40

#### Screening Cognitive Impairment in a Movement Disorder Clinic: Comparison of the Montreal Cognitive Assessment to the SMMSE

Ronan O Caoimh, Mary J Foley, Steve Trawley, Niamh O Regan, Ciara McClade, Mary Hickey, D. William Molloy, Suzanne Timmons

*Centre for Gerontology & Rehabilitation, St. Finbarr's Hospital, Cork, Ireland*

**Introduction:** The Montreal Cognitive Assessment (MoCA) is recommended by the Movement Disorder Society for cognitive testing in patients with Parkinson's disease (PD). The MoCA is weighted more towards executive functioning and less towards orientation and language, which are relatively well preserved in PD. However, the mini-mental state examination (MMSE) is still commonly used for PD patients. The purpose of the study was to investigate the degree to which cognitive impairment is missed in subjects with PD when the MMSE rather than the MoCA is used.

**Methods:** All patients attending a movement disorder clinic and had both the MoCA and standardised MMSE (SMMSE) performed were identified by retrospective case-note review. Duration and severity of PD (Unified PD Rating Scale, UPDRS) were also noted.

**Results:** 19 subjects were identified, median age 75. Median years (IQR) since diagnosis of PD was 7 (7.5) and median total UPDRS score 37 (22.7). Median SMMSE was 26 (3) and median MoCA was 20 (6). A strong, positive correlation was seen between both instruments,  $r = 0.55$ ,  $p = 0.01$ . Only two of the 17 patients who screened positive for cognitive impairment using the MoCA had screened positive on the SMMSE (cut-off  $<24/30$  used for both tests). The relationship between the UPDRS motor subscale and MoCA approached significance,  $r = 0.42$ ,  $p = 0.08$ . Of note, six subjects with MoCA-identified cognitive impairment were receiving anticholinergic medication, three dopamine agonists, and eleven were not receiving a cholinesterase inhibitor. Despite screening positively, most referrals (56 %,  $n = 10$ ) didn't mention possible cognitive impairment.

**Discussion:** The SMMSE, because of its low ceiling effect and selected cognitive domains, misses cognitive deficits in patients with PD. This may result in failed opportunities to initiate early appropriate treatment and discontinue inappropriate medications like anticholinergics. Our study highlights the need to use the MoCA for cognitive testing in PD.

### O41

#### The Quick Mild Cognitive Impairment (Qmci) Screen: A New Screening Tool for Mild Cognitive Impairment

Ronan O Caoimh<sup>1</sup>, Yang Gao<sup>1</sup>, Ciara McClade<sup>1</sup>, Liam Healy<sup>1</sup>, Paul Gallagher<sup>2</sup>, Suzanne Timmons<sup>1</sup>, D. William Molloy<sup>1</sup>

<sup>1</sup>Centre for Gerontology & Rehabilitation, St. Finbarr's Hospital, Cork, Ireland, <sup>2</sup>Department of Geriatric Medicine, Cork University Hospital, Cork, Ireland

**Introduction:** Differentiating mild cognitive impairment (MCI) from normal cognition (NC) is challenging. We have developed a new short (3–5 min) cognitive screening instrument, the Qmci, composed of six subtests, which has been shown to be more sensitive than the Standardised Mini-Mental State Examination (SMMSE) at differentiating MCI from NC and dementia. The objective was to demonstrate the validity of the Qmci based on analysis of the derivation sample and to investigate the contribution each subtest of the Qmci makes to the overall sensitivity of the instrument.

**Methods:** Data from 965 subjects (335 cases and 630 controls, without memory loss), attending four dedicated memory clinics, were analysed. Area under the receiver operating curves (AUC) compared the sensitivity and specificity of the Qmci to the SMMSE and between subtests.

**Results:** The Qmci was more sensitive than the SMMSE in differentiating MCI from NC, AUC: 0.86 compared to 0.67. It was particularly more accurate for identifying MCI in older adults, over 75 years with an AUC of 0.86, (SMMSE scoring 0.55). All subtests of the Qmci differentiated MCI from NC. Logical memory (LM), a test of verbal memory, performed the best, (AUC 0.80) and word registration the worst, (0.56). The ability of the Qmci to differentiate MCI from dementia was similar to the SMMSE. This was not affected by the dementia severity grading, being sensitive to mild and more severe cases of dementia. Each subtest of the Qmci differentiated MCI from dementia.

**Discussion:** The Qmci is more sensitive than the SMMSE at differentiating MCI from NC, especially for older adults. LM is its best performing subtest. This study suggests that the Qmci could be used as a rapid screening test for cognitive impairment, particularly for MCI. Further research will focus on comparing the Qmci to other MCI screens such as the Montreal Cognitive Assessment.

## O42

### Cognitive Impairment Increases Risk of Infection, Recurrence and Death Due to Hospital-onset *C. Difficile*

Alan Martin<sup>1</sup>, Katie Solomon<sup>3</sup>, Caoilfhionn O'Donoghue<sup>1</sup>, Margaret Hannan<sup>1</sup>, Lynda Fenelon<sup>2</sup>, Lorraine Kyne<sup>1</sup>

<sup>1</sup>Mater Misericordiae University Hospital, Dublin, Ireland,

<sup>2</sup>St Vincent's University Hospital, Dublin, Ireland,

<sup>3</sup>University College Dublin, Dublin, Ireland

**Introduction:** Clostridium Difficile infection (CDI) is an important cause of hospital acquired infections predominantly affecting frail older people. Cognitive impairment increases hospitalisation risk and worsens treatment outcomes. This study's aim was to determine whether cognitive impairment and dementia increases CDI risk and worsens CDI outcomes.

**Methods:** We prospectively recruited 150 consecutive, unselected cases of hospital-onset CDI at two university teaching hospitals in Dublin from October 2007 to March 2009. We included all adults with hospital-onset CDI and excluded if CDI was: recurrent, onset <48 h after admission, or onset in another institution. Fifty controls with *C. Difficile* toxin-negative diarrhoea were recruited. Patients were followed up for 60 days. Definitions: Cognitive impairment = MMSE <25; Dementia = dementia diagnosis in the

patient record at recruitment; Severe CDI = colectomy, ICU treatment or death due to CDI.

**Results:** Median age was 78 years, 58 % were female, with no significant differences in age, gender for cases and controls. MMSE <25 was associated with increased odds for CDI (OR = 1.6; 95 % CI: 1.1–2.3) as were endoscopy, nasogastric feeding, Mini-Nutritional Assessment (MNA) score <17, Barthel score <40, Horns score >2, Recent hospitalization, Charlson score ≥3 and antibiotic use. Dementia was not associated with increased risk of CDI. On multi-variable analysis MMSE <25, nasogastric feeding, endoscopy and MNA <17 were independently associated with risk of CDI. Patients with MMSE <25 had higher odds of recurrence (OR = 9.3, 95 % CI: 1.2–74.0) and death within 60 days (OR = 6.2, 95 % CI: 1.4–30.0) compared to patients with a normal MMSE. Odds of severe CDI was not increased. Patients with dementia had increased odds for recurrence only (OR 3.0, 95 % CI: 1.2–7.6).

**Discussion:** Our study shows an independent association between MMSE <25 and CDI. Patients with CDI and MMSE <25 had a higher rate of recurrence and death without an apparent rise in CDI severity. Patients with CDI and dementia were at increased risk of recurrence but not severe CDI or death.

## O43

### The Development of the Attitudes to Personal Ageing Scale: Measuring Attitudes to Self-Ageing

Frances O'Donnell, Ann O'Hanlon, Moira Maguire

Dundalk Institute of Technology, Co. Louth, Ireland

**Introduction:** Attitudes to ageing can impact significantly on older adults' health and well-being (Levy et al. 2002), yet few studies have been carried out in this area. This paucity of research is, in part, due to a lack of choice in measures that are truly suited for use with older people. The current study sought to develop a new attitudes-to-ageing measure that is short, easy to score and simple to interpret, thus facilitating further research in this field.

**Methods:** 125 mid-life and older adults were identified through convenience and snowball sampling (66 % female; mean age 58.4 years; SD = 11.32; range 40–84). New items for the Attitudes to Personal Ageing Scale (APAS) were generated from four focus group discussions and literature. Additional measures included existing attitudes to ageing measures, as well as measures of self-esteem and generativity.

**Results:** The APAS comprises two subscales: 'Attitudes to Physical Ageing' and 'Attitudes to Psychosocial Ageing'. The reliability of both sub-scales was acceptable ( $\alpha = 0.76$  and  $0.71$ , respectively). Both sub-scales correlated in the expected direction with other attitudes to ageing measures, and with self-esteem and generativity.

**Discussion:** Findings from this study indicated that the APAS has good psychometric properties and is easy to read and score. With just 11 items, the questionnaire is short, which can be helpful given the space limitations often apparent in questionnaire packs. Given that the APAS was developed directly from older peoples' considerations of the ageing experience, it may also be a more sensitive indicator of the latter concept than previous attitudinal measures and may provide a useful tool for professionals and others interested in this dynamic area of research.

#### References:

Levy BR, Slade MD, Kasl SV (2002) Longitudinal benefit of positive self-perceptions of ageing on functional health. *J Gerontol Psychol Sci* 57B:409–417.

## O44

### The Influence of Clinical Governance Alternatives on Emergency Department Utilization and Mortality Rates in a Publicly Funded Elderly Residential Care Home (Nursing Home)

Frances Pidgeon, Katriona Manning, Dermot Power

St. Mary's Hospital, Phoenix Park, Dublin 20, Ireland

**Background:** Much has been published on comparisons of quality of care in for-profit versus not-for-profit nursing homes (NHs) with a recent meta-analysis suggesting not-for-profit NHs deliver higher quality of care. This has been attributed to higher staffing ratios among other factors. We now report on two separate quality outcome measures (emergency department (ED) utilisation and mortality rates in the NH versus in the ED) in a not-for-profit NH under two distinct governance arrangements.

**Methods:** In early 2011, the clinical governance of a 40 bed community (publicly funded) NH was transferred from General Practice services to a specialist Geriatric service, based in St. Mary's Hospital, Phoenix Park. We collected data prospectively on ED utilisation and mortality rates and setting in the 12 months before and after this change in clinical governance.

**Results:** In the 12 months January to December 2010, 36 transfers to ED occurred. In the following 12 months, although there were fewer occupied beds in the NH, only 16 patients were transferred (45 vs. 22.3 transfers per 50 occupied beds,  $p < 0.05$ ). A similar number of deaths occurred in the two 12 month periods (11.8 vs. 9.7 per 50 occupied beds, NS), however significantly more deaths occurred in the NH setting and not in the ED or acute hospital (3.1 vs. 9.2 per 50 occupied beds,  $p < 0.05$ ).

**Discussion:** The quality of health experience for NH residents can be improved through the involvement of specialist geriatric services. In our model this was achieved through a transfer of clinical governance to the specialist service. Among other factors, the cost implications of the change would need to be quantified before any recommendations could be suggested.

## O45

### Predicting the In-Patient Outcomes of Acute Medical Admissions from the Nursing Home

Roman Romero-Ortuno<sup>1</sup>, Diarmuid O'Shea<sup>2</sup>, Bernard Silke<sup>1</sup>

<sup>1</sup>Division of Internal Medicine, St James's Hospital, Dublin, Ireland,

<sup>2</sup>Department of Medicine for the Elderly, St Vincent's University Hospital, Dublin, Ireland

**Introduction:** Many nursing home (NH) residents experience a care transition to the acute hospital. Concerns are often expressed that the outcomes of NH patients in the hospital tend to be poor, but the case-mix from the NHs is varied and reflects that of the broad population of older people, with potential risk differences. Our aim was to identify predictors of negative in-patient outcomes (i.e. prolonged hospital stay and death) in NH residents admitted to the hospital as medical emergencies.

**Methods:** This was a retrospective, single-centre study. We studied all NH patients requiring acute medical admission under the on-call medical team between 1 January 2002 and 31 December 2010. Measurements included patient characteristics on admission (i.e.

demographics, comorbidity level, major diagnostic categories, vital signs and laboratory profile). Outcomes: prolonged hospital stay ( $\geq 30$  days) and in-hospital mortality. The characteristics of NH patients were compared with those of non-NH patients aged  $\geq 65$ . Multivariate analyses were based on generalized estimating equations and classification trees.

**Results:** There were 55,763 acute medical admissions over the period, of which 1,938 (3.5 %) were from NHs. As compared to non-NH patients aged  $\geq 65$ , NH patients had greater acute illness severity. NH patients had a median length of stay of 7 days, and 17 % had a prolonged admission. Their overall mortality rate was 23 %. However, the classification analysis showed substantial patient heterogeneity: the subgroup with the highest mortality (54 %,  $N = 100$ ) had positive serum troponin and a respiratory major diagnosis. The lowest mortality rate (4 %) was seen in those without positive troponin, urea of 12 mmol/L or less, and albumin of more than 37 mg/L ( $N = 226$ ).

**Discussion:** Simple serum markers such as troponin, urea and albumin may predict mortality in medically admitted NH patients. This may help healthcare practitioners to anticipate their clinical course at an early stage.

## O46

### Nursing Home Residents in the Emergency Department: A Cohort Study

Sean Kennelly, Robert Briggs, Desmond O' Neill

Tallaght Hospital, Dublin, Ireland

**Introduction:** The objective of this study was to characterise emergency department (ED) use by nursing home (NH) residents in an urban teaching hospital.

**Methods:** An 18-week prospective cohort study of all NH residents attending ED. Information was extracted from clinical notes and letters, clinical review, and collateral history.

**Results:** There were 155 ED visits by 116 NH residents (Age  $80.3 \pm 9.6$  (SD) years,  $n = 76$  (65 %) female). Thirty-two patients (27.6 %) attended ED at least once in the 6-months prior to their index visit. The mean NH length of stay was  $1,035 \pm 1,022$  days. These patients had multiple medical co-morbidities ( $5.4 \pm 1.9$ ), and polypharmacy ( $\geq 5$  medications) ( $n = 111$ , 96 %). Pre-morbid limited mobility ( $n = 106$ , 91 %), dementia ( $n = 71$ , 61 %) and recurrent falls ( $n = 29$ , 25 %) were highly prevalent.

Thirty-two (27.6 %) patients had more than one ED attendance over the 18 weeks. Only a third of ED visits ( $n = 49$ , 31.6 %) were during normal working hours (Monday–Friday, 09.00–17.00). Patients were reviewed by their regular NH doctor pre-transfer for fifty-six of the ED visits (36 %), but on sixty-one occasions (39.4 %) patients presented without prior review by a doctor. Patients fulfilled criteria for delirium on forty-eight (31 %) ED visits, and for systemic inflammatory response syndrome (SIRS) on fifty-five (35.5 %) ED visits. The most frequent reasons for ED referral were pneumonia (29 %), falls (16.8 %), and urinary tract infection (8.4 %). The hospitalisation rate was 71.6 % ( $n = 111$ ) for all ED visits. The majority of ED visits were potentially preventable ( $n = 125$ , 80.6 %).

**Discussion:** NH residents frequently visit ED, present unwell, and have a high levels of pre-morbid complexity. The majority of these ED visits occur outside normal working hours and without prior review by their regular doctor. With better NH access to gerontological specialist care, many ED visits are potentially preventable.



## O47

**NH ACE (Nursing Home Acute Care Evaluation):  
A Targeted Intervention in Nursing Home Patients  
to Enhance Access to Appropriate Acute Care**

Siobhan M Kennelly, Josephine Soh, Lelane VanDer Poel, Caitriona Tiernan, Melissa Ryan, Eamon Dolan, PME McCormack

*Department of Medicine for the Elderly, Connolly Hospital, Dublin, Ireland*

**Introduction:** An enhanced rapid-access model (NH-ACE) was developed in December 2011 as part of a specialist outreach/in-reach liaison model to nursing homes (NH) with a view to reducing inappropriate ED (Emergency Department) attendances and improving the quality of the ED experience for those attending.

**Methods:** NH ACE is focussed on three main areas. Proposed transfers of patients to ED from Nursing Home during working hours are discussed with CLT prior to transfer; where/if appropriate rapid assessment is facilitated either in NH or Day Hospital within 72 h by CLT; direct review of NH patients transferred to ED during working hours is facilitated by CLT where appropriate. Data was collected prospectively from 05/12/2011 to 05/05/2012.

**Results:** A total of 227 ED attendances from 24 Nursing Homes; 48 % (n = 109) requiring hospital admission. When compared with ED attendances and hospital admissions for the same period in 2008/2009 this represented a reduction of 24 % in ED attendances and 37 % in admissions to hospital in this patient group. 104 attendances (46 %) occurred during working hours with 46 of these (44 %) seen by CLT in ED (mean LOS in ED 14.7 vs. 20.2 h for those admitted Out-of-hours [OOH]); 27 patients (58.6 %) were discharged to NH post ED review by CLT vs. 48 % OOH (Out-of-hours). Rapid access on-site assessment in NH was facilitated in 71 patients; 18 patients reviewed in Day Hospital; 3 required admission to hospital post on-site assessment. Falls were the commonest cause of ED presentation (27 %) followed by respiratory tract infection (24 %).

**Discussion:** The NH ACE model has been useful in directing 'appropriate care in the appropriate place' for frail older patients in nursing homes. Further targeting in the area of falls prevention in the Nursing Home and advance care planning is underway to further enhance the model.

## O48

**Delirium in Older Hospital Inpatients: Incidence,  
Prevalence and Motor Subtyping**

Niamh O'Regan<sup>1</sup>, Steve Trawley<sup>1</sup>, Will Molloy<sup>1</sup>, David Meagher<sup>2</sup>, Suzanne Timmons<sup>1</sup>

<sup>1</sup>Centre for Gerontology and Rehabilitation, University College Cork, Cork, Ireland, <sup>2</sup>University of Limerick Medical School, Limerick, Ireland

**Introduction:** Delirium is under-detected in clinical practice, with hypoactive cases being less readily recognised and linked to poorer outcomes. Although delirium occurs frequently in older patients, little is known about its motor profile in this group. Our aim was to describe the epidemiology and motor subtype of delirium and subsyndromal delirium (SSD: features of delirium without full

diagnostic criteria) in elderly patients admitted under medical care.

**Methods:** Patients over the age of 70, admitted medically, were assessed for delirium within 36 h of presentation, using the Delirium Rating Scale-Revised 98 (DRS-R98). Patients who did not have prevalent delirium underwent daily assessment for delirium onset, for the first week of admission. At each assessment, the Delirium Motor Subtype Scale (DMSS) was completed. This is a new scale used to ascertain the motor activity profile of delirium and has been shown to have predictive validity with regard to outcome.

**Results:** To date, 163 patients have been assessed (51 % men; median age 82, range 70–99). 64 patients (39.3 %) had prevalent delirium on admission. Of the remainder (n = 99), 19 patients (19.2 %) developed incident delirium and a further 64 (64.6 %) had SSD at some point during their hospital stay. The most common motor subtype for patients with delirium was hypoactive (56.6 %), whereas patients with SSD more often had few motor features (53.1 %). Patients with delirium were twice as likely to have a hypoactive profile, than those with SSD (OR 2.18, 95 % CI 1.12–4.24, p = 0.022).

**Discussion:** Our preliminary results show that almost 40 % of older patients admitted medically have delirium at presentation. Approximately 20 % of the remainder develop delirium during admission. The most common motor subtype in older patients with delirium is hypoactive, the most under detected form. This underlines the need for vigilance with regard to monitoring for delirium in the acute hospital setting.

## O49

**Knowledge, Skills, and Attitudes of Clinicians Towards  
the Assessment of Cognition in Older Patients  
in the Emergency Department**

Sean Kennelly, Deirdre Morley, Martin Rochford, Desmond O' Neill

*Tallaght Hospital, Dublin, Ireland*

**Introduction:** Although cognitive impairment and delirium are highly prevalent in older patients who present to the Emergency Department (ED), multiple studies have highlighted inadequate detection by doctors. This study assessed the knowledge, skills, and attitudes of physicians, towards the screening of older patients in ED for cognitive deficits.

**Methods:** A 14-item questionnaire was administered to all medical, surgical, and ED physicians involved in the acute care of older patients in an urban teaching hospital.

**Results:** The questionnaire was completed by <sup>76</sup>/<sub>97</sub> (78 %) of eligible respondents. Respondents reported screening an average of one in four older patients that they reviewed. Almost one-third (n = 22, 29 %) felt they lacked the relevant expertise to perform cognitive screening, and those with training in geriatrics were less likely to cite lack of expertise as a significant factor. While the majority felt screening for cognitive deficits in older patients in the ED was important (n = 59, 78 %), clinicians reported several limiting factors that restricted their efforts to do this: lack of a rapid screening tool; lack of privacy; too much noise; and time constraints. There was no consensus on who should perform screening in this setting.

**Discussion:** This is the first study to investigate potential reasons for inadequate detection of cognitive impairment in older ED patients by doctors, and it reports several factors that limit cognitive screening of older ED patients. Greater emphasis must be placed on developing a gerontologically attuned environment in the ED, and clarification of the responsibilities of each discipline in detection, assessment and

management of delirium and/or dementia. Implementation of standardised, brief, screening instruments, and geriatrician input in the ED would improve overall detection and management of cognitive impairment in this group of patients.

## O50

### TUDA (The Trinity, University of Ulster and Department of Agriculture Study): RBANS Specificity in an Elderly Out-Patient Cohort

Robert Coen<sup>1</sup>, Kevin McCarroll<sup>1</sup>, Miriam Casey<sup>1</sup>, Bernard Walsh<sup>1</sup>, Davis Coakley<sup>1</sup>, Brian Lawlor<sup>1</sup>, John Scott<sup>2</sup>, Anne Molloy<sup>2</sup>, Helene McNulty<sup>3</sup>, Mary Ward<sup>3</sup>, Sinead McNiffe<sup>1</sup>, Helen Toohey<sup>1</sup>, Conal Cunningham<sup>1</sup>

<sup>1</sup>Mercers Institute for Research on Ageing, St. James's Hospital, Dublin, Ireland, <sup>2</sup>Department of Biochemistry Trinity College Dublin, Dublin, Ireland, <sup>3</sup>Biomedical Sciences Research Institute, University of Ulster, Coleraine, Ireland

**Introduction:** Repeatable Battery for Assessment of Neuropsychological Status (RBANS) is a widely used neuropsychological screening battery. The original ("Manual") norms are stratified by age. Subsequent norms (Duff et al. (2003) Clinical Neuropsychologist 17: 351–366) were based on a larger sample and also stratify by education. In our previous analysis of data from TUDA fewer participants failed any RBANS Index on Duff than on Manual norms (Coen et al., European Geriatric Medicine, S60, Vol 1 Suppl 1) but the failure rate (63 %) was still unexpectedly high. To what extent this represents genuine mild cognitive impairment versus misclassification of clinically normal participants was unclear. The present study investigated this further in a sub-sample of TUDA participants. **Methods:** We identified 278 TUDA participants who were clinically normal based on chart review and these criteria: MMSE >28/30, FAB (Frontal Assessment Battery) >12/18, HADS anxiety <8, CESD depression <16, no history of stroke or TIA, no self report of memory problems or family concern. Of these, 65 who completed the RBANS and failed one or more Indices using Manual norms (<1.5 studied developed "impaired") were re-evaluated using Duff norms.

**Results:** Mean age = 76.3, mean years of education = 11.6. Of the 65 clinically normal participants who had failed one or more Indices using Manual norms 41/65 were normal on all RBANS Indices using Duff norms (37 % failure rate). Numbers failing by Index are as follows: Immediate Memory (0), Visuospatial/Construction (12), Language (6), Attention (4), Delayed Memory (1), Visuospatial/Construction and Attention (1).

**Discussion:** No test is 100 % sensitive and specific, with a risk of psychometric misclassification when grading cognition as normal or

impaired. On RBANS the Duff norms misclassified substantially fewer clinically normal individuals than the original Manual norms, and should be used in cases where specificity is a priority. The Visuospatial/Construction Index was particularly prone to misclassification.

## O51

### A Group Intervention to Reduce Burden and Symptoms of Depression in Informal Dementia Caregivers

Mark Tyrrell

University College Cork, Cork, Ireland

**Introduction:** To establish if a group intervention based on the Progressively Lowered Stress Threshold Model (PLST) had a beneficial effect on informal dementia caregivers' burden and their symptoms of depression.

**Methods:** Design: A pre test-post test design. Instruments: Caregiver burden was measured using the Zarit Burden Interview and Caregiver symptoms of depression was measured using the Centre for Epidemiological Studies Depression Scale.

128 informal dementia caregivers: 93 (73 %) completed baseline measures; 90 (97 %) completed questionnaires at 7 weeks, and 85 (91 %) at 13 weeks.

**Results:** The mean burden score at baseline was 41.60 (SD 14.70) indicating that the average caregiver was experiencing moderate to severe burden. This score decreased to 38.04 (SD 15.11) 2 weeks after the intervention (Week 7) but increased again to 39.12 (SD 15.98) 8 weeks after the intervention (Week 13). The change in score between baseline and Week 7 was statistically significant ( $p = 0.009$ ) but the change between baseline and Week 13 was non-significant ( $p = 0.095$ ). The mean depression score at baseline was 18.82 (SD 9.93) suggesting that on average, caregivers had scores commensurate with a diagnosis of clinical depression (CES-D 16+). At 2 weeks post intervention (Week 7), this mean score decreased to 14.02 (SD 9.21) with a slight rise at 8 weeks post intervention (Week 13) (mean 15.92; SD 10.36). The decrease in mean depression scores between baseline and Week 7 and between baseline and Week 13 both reached statistical significance ( $p < 0.001$ ). There was a large positive correlation between burden and symptoms of depression at all three time points ( $p < 0.001$ ). Results also show that changes in scores were influenced by certain characteristics.

**Discussion:** Adapting the original PLST intervention for group delivery can reduce informal dementia caregivers' levels of burden and their symptoms of depression.

## POSTERS

## P1

**A Review of the Workload of Providing a Psychiatry of Old Age Liaison Service to a Supra Regional Centre**Anne Gallagher<sup>1</sup>, Mary Davoren<sup>2</sup>, Karena Meehan<sup>1</sup><sup>1</sup>Galway University Hospital, Galway, Ireland, <sup>2</sup>Central Mental Hospital, Dublin, Ireland

**Introduction:** Older people occupy two-thirds of UK General Hospital beds, with similar figures in Ireland. Psychiatric disorder is common amongst elderly patients in medical and surgical wards. GUH provide a range of emergency and elective services and serves a large catchment area in the west of Ireland, as well as being a designated supra regional centre for cancer and cardiac services serving the region of one million people. This audit examined the workload of providing a Psychiatry of Old Age liaison service to GUH.

**Methods:** A retrospective chart review of all liaison referrals, to the Psychiatry of Old Age Service, from the 1st of January 2010 to the 1st of September 2010 was conducted. Information pertaining to source of referral, diagnosis, and treatments instigated was collected.

**Results:** of the 100 charts reviewed, 51 % were male patients. The majority (78 %) of those patients seen were from the “older” old group. The majority of consult requests came from the General Medical teams (59 %) with remaining from Medicine for the Elderly (19 %), Surgical T (12 %) and Orthopaedic Teams (8 %). Diagnoses included depression (20 %), delirium (15 %) and dementia (12 %). 58 % of those patients seen resided outside the catchment area of the Psychiatry of Old Age Team.

**Discussion:** Over half of the patients seen by the Psychiatry of Old Age Team were from outside the catchment area. The Liaison aspect the Psychiatry of Old Age service is provided in the main by the medical members of the team with input from other team members when required. Given that resources are allocated to teams on the basis of psychiatric catchment areas that can be vastly different to the catchment area of the General Hospital to which the Psychiatry of Old Age team is providing a liaison service, this finding has important implications for planning and resources.

## P2

**An Intervention Study Exploring the Effects of Providing Older Adult Hip Fracture Patients with an Information Booklet in the Early Postoperative Period**Siobhan Murphy<sup>1</sup>, Col Conway<sup>1</sup>, Niamh McGrath<sup>2</sup>, Breda O’ Leary<sup>2</sup>, Mary p O’ Sullivan<sup>2</sup>, Dawn O’ Sullivan<sup>2</sup><sup>1</sup>University College Cork, Cork, Ireland, <sup>2</sup>Cork University Hospital, Cork, Ireland

**Introduction:** Hip fracture among older people can have long-lasting consequences with the majority of patients failing to achieve their pre-fracture functional status. Early postoperative mobility may have a positive effect on long-term recovery. The importance of providing postoperative information on mobility has been highlighted. It is suggested that patients remain passive in their recovery when they do not understand the importance of mobilisation. The study aimed to determine whether the provision of an information booklet on mobilisation

improves early mobility postsurgical repair of hip fracture using a pre-test-pos *t* test design of two treatments and a usual care control group.

**Methods:** 83 adults post-surgical repair of hip fracture,  $\geq 65$  years, were recruited to the study. Participants were assigned to one of three groups, a usual care group, treatment group 1 (T1) usual care plus basic information booklet or treatment group 2 (T2) usual care plus detailed information booklet. Data collection 3 days post-surgery and prior to discharge included the Mini-Mental State Examination, a Demographic Questionnaire, the Elderly Mobility Scale and a Numerical Pain Scale.

**Results:** Greatest improvements in Elderly Mobility Scale scores occurred in T1, with least changes observed in T2. Changes did not reach significance level ( $p = 0.0105$ ).

**Discussion:** The results of the study suggest that the provision of basic information is preferable and highlights a deficiency of education in usual care. Relevance to clinical practice: hip fracture patients should be provided with an educational booklet containing basic information on mobility to promote optimal recovery.

## P3

**Self-neglect in Old Age: A Survey of Old Age Psychiatrists in Ireland**

James G. O’Brien, Colm Cooney, Mairead Bartley, Desmond O’Neill

*University of Louisville, Louisville, Kentucky, USA*

**Introduction:** The objective of this study was to survey all old age psychiatrists in Ireland regarding their experience with self-neglect.

**Methods:** All 22 old age psychiatrists in Ireland were surveyed via Survey Monkey utilizing a 33 item questionnaire. The authors modified a survey they had used previously with geriatricians.

**Results:** The response rate was 68 % ( $15/22$ ) with 92 % of respondents having seen a case in the past year and 23 % seeing between six and ten cases. Females comprised 69 % of the respondents. Most (69 %) were located in an urban setting. Loss of self care and poor hygiene were reported as universal findings. Non-compliance with medication and hoarding were cited by 93 % of respondents. Refusal of services was the next most common presenting feature by 86 % of respondents. Dementia and lifelong personality disorder were identified as the most common contributing causes followed by alcoholism, schizophrenia, and depression. 59 % ( $9/12$ ) stated that the outcome was unsatisfactory for the patient and 77 % identified self-neglect as more frustrating to manage than other problems. Most referrals were by public health nurses followed by general practitioner referrals.

**Discussion:** Self-neglect in old age is a common problem encountered by old age psychiatrists. Old age psychiatrists play a key role in managing these victims. Most were dissatisfied with available social service resources.

## P4

**The Activity of Daily Living Suite**

Joanne Cannon

*Institute of Public Administration, Dublin, Ireland Royal Hospital Donnybrook*

**Introduction:** The Activity of Daily Living (ADL) Suite in The Royal Hospital Donnybrook is a unique project developed to promote

independence in patients undertaking the challenging process of rehabilitation. The Activity of Daily Living Suite is a non-clinical environment within the Occupational Therapy Department set up to allow ease of assessment in identifying the most suitable equipment for patients and their carers undertaking rehabilitation. The objectives of the study were: (1) To promote independence for patients who have an acquired or progressive disability through a process of education and the practical experience of positive environmental adaptation; (2) To reduce the fear factor of disability and show patients and carers that independence is achievable in daily activities; (3) To expedite the process of discharge planning and improve the quality of life and safety for patients returning to living in the community thereby reducing the length of hospital in-patient stay; (4) To provide a real life experience for functional assessment by Occupational Therapists in the on-going process of positive adaptation to disability for service users reducing the potential for falls, and social breakdown post discharge from hospital.

**Discussion:** The Person Environment Occupation (PEO) Model first described by Law et al. In 1996 is the Model of Practice the Activity of Daily Living Suite is theoretically founded upon. We feel that the Activity of Daily Living Suite and the experience a patient can gain from trialling and exploring the aids and appliances that can enhance occupational engagement in daily life is fundamental to successful adaptation to disability and enhanced quality of life for patients.

Gillen (2004) states ‘therapists need to be creative in creating environments within their clinical settings that provide typical everyday challenges. Using functional, natural tasks rather than rote exercises in treatment is important’.

## P5

### Waiting for LTC Under General Medicine: Trends and Outcomes

Roman Romero-Ortuno<sup>1</sup>, Carol Murphy<sup>2</sup>, JB Walsh<sup>2</sup>, Conal Cunningham<sup>2</sup>, Deirdre O’Riordan<sup>1</sup>, Bernard Silke<sup>1</sup>

<sup>1</sup>*Division of Internal Medicine, St James’s Hospital, Dublin, Ireland,*

<sup>2</sup>*Medicine for the Elderly Department, St James’s Hospital, Dublin, Ireland*

**Introduction:** In Irish hospitals a number of older people wait for long-term care (LTC) in an acute bed. These patients are admitted to the hospital from home and, once medically stable, they are ‘listed’ for LTC following a favourable geriatric assessment. Listed patients may wait for a nursing home (NH) bed for some time. Some of them die whilst waiting. We retrospectively audited the trends in waiting times and mortality of listed patients in our general medicine department.

**Methods:** The sample consisted of all general medical patients listed for LTC between January 2004 and December 2010. Their characteristics were drawn from an anonymised in-patient database derived from linkage of the computerised patient administration system (PAS) to the Hospital In-Patient Enquiry (HIPE) scheme. Descriptives were run with SPSS 16.0.

**Results:** 992 patients were listed over the period. Their mean age was 82 years, and 65 % were females. On average, the mean time to listing was 66 days, and the mean time post listing was 99 days. Overall, 18 % died whilst waiting for a NH bed. Comorbidity levels in those who died were higher ( $P = 0.011$ ). Over time, the time-to-listing remained stable, whilst the time-post-listing showed significant fluctuations (e.g. mean of 38 days in 2006 versus 137 days in 2008).

**Discussion:** In our general medical department it takes an average of 2 months from admission to list an older patient for LTC. This time has remained quite constant over time, suggesting that a ‘standard’

multidisciplinary assessment process is in operation. The significant variability in post-listing waiting time suggests the influence of ‘external’ factors such as NH bed availability and on-going changes in LTC policy. To minimise inappropriate transfers to LTC, further research should pay attention to mortality predictors in listed patients. Those at low risk of deterioration could be assessed in suitable step down facilities.

## P6

### Animal-Assisted Intervention: Promoting Wellbeing in a Residential Care Unit for Older Persons

Mary Doyle<sup>1</sup>, Desmond O’Neill<sup>2</sup>

<sup>1</sup>*Peamount Healthcare, Dublin, Ireland,* <sup>2</sup>*Adelaide & Meath Hospital, Dublin, Ireland*

**Introduction:** Interaction with animals can provide a focus and interest for older people in residential care, having a positive impact on wellbeing, including reduction of loneliness, lowering of stress levels and blood pressure, increase in confidence, calmness, movement, conversation and reminiscing.<sup>1</sup> To facilitate Animal Assisted Activities where the individual has access to animals in a general way, the residential care facility brought 5 hens to live at the facility. The aim of the study was to establish what effect, if any, the presence of the hens had on residents in the care facility.

**Methods:** Discussions were held between a staff member and a number of residents ( $n = 10$ ) and their relatives ( $n = 4$ ) with specific reference to resident attitudes to the hens and relatives’ impressions of behaviour change in relative attributable to the animals. Opportunistic observation of residents’ behaviour in relation to the animals was also recorded.

**Results:** Hen references ( $n=52$ ) from discussions and observations were grouped into similar themes, a number of main themes emerged including: An increase in socialisation and participation centred on conversations about the hens; An increase in activity levels and purposeful visits outdoors; Increased reminiscence amongst residents particularly of former pet owners; A perceived reduction in loneliness, particularly in those very disabled who participated in non-direct care of the animals through sharing of previously unknown expertise.

**Discussion:** Similar themes were identified from discussions and observations, all suggestive of a positive effect of the animals on the overall ‘morale’ of the care facility. Having resident animals in a care home can have a positive effect on residents’ wellbeing, but requires the commitment staff to ensure the residents and animals receive the best care

#### References:

<sup>1</sup> Edward N, Becks A (2002) Animal-assisted therapy and nutrition in Alzheimer’s disease. *J Nurs Res* 24:697–712.

## P7

### What’s Another Year? Level 2 Palliative Care Provision Within a Continuing Care Setting: Staff Views and Perspectives

Geraldine Tracey, Valerie O’Reilly

*Our Lady’s Hospice & Care Services, Dublin, Ireland*

**Introduction:** Provision of Level 2 Palliative care is a recent innovation nationally. At Our Lady’s Hospice and Care Services Level 2 care has been integrated into existing continuing care structures.



Care is delivered by a Multidisciplinary Team (MDT) augmented by support from the Palliative Care Advanced Nurse Practitioner and a registrar. Little research has been undertaken to date to elicit views of staff re acquisition of new skills and to evaluate attitudinal shifts as a consequence of this development. The objectives of the study were to: Evaluate level of confidence of staff pertaining to a range of common symptom complexes encountered in their work; Capture staff views on provision of care for this patient cohort highlighting challenges and achievements; Facilitate service evolution by identification of educational needs, interventions & supports for future.

**Methods:** A questionnaire was devised and distributed to the MDT seeking both qualitative and quantitative data. Staff rated their confidence in assessing and managing key symptoms and delivering psychosocial care. They were also invited to describe in narrative form relevant issues pertaining to provision of care for these patients. The qualitative data was analysed and grouped into themes.

**Results:** 125 questionnaires were distributed with a response rate of 51 % (n = 54). 38 % of respondents were nurses (n = 24) with smaller representation of other MDT members. Symptom assessment, management and psychosocial care scores demonstrated a high level of confidence. The qualitative data themes included increased workload, time constraints around addressing psychosocial issues and suboptimal interdisciplinary communication. Conversely, some staff felt stimulated and enriched by caring for this group and welcomed the opportunity to broaden their professional horizons.

**Discussion:** Level 2 provision continues to evolve with demand exceeding supply. Staff have largely embraced the challenges inherent in caring for this new patient cohort. New innovative approaches to support and meet staff learning needs are being developed.

## P8

### Sustained Attention and Frailty in the Older Adult Population

Aisling O'Halloran, Rose Anne Kenny

*TILDA, Trinity College, Dublin, Ireland*

**Introduction:** Sustained attention is a fundamental executive function. Previous evidence suggests frail older people perform poorly on tasks that place a higher demand on resources of attention. We investigated whether increasing sustained attention variability was associated with frailty in a population representative sample of adults aged  $\geq 50$  years using the Sustained Attention to Response Task (SART).

**Methods:** 4,785 participants of The Irish Longitudinal Study on Ageing (TILDA) completed a comprehensive health assessment. Frailty was defined by having  $\geq 3$  of low gait speed, low grip strength, unintentional weight loss, self-reported exhaustion and low physical activity. Mean and variability of reaction time (RT), commission and omission errors were recorded during a fixed-SART. The Fast Fourier Transform (FFT) procedure was used to characterise variability associated with the arousal and vigilance aspects of sustained attention.

**Results:** Among the Irish population  $\geq 50$  years of age, 3.7 % were frail and 35.3 % were pre-frail. Non-frail participants had significantly less RT variability ( $p < 0.001$ ), and fewer commission ( $p < 0.001$ ) and omission ( $p < 0.001$ ) errors than their pre-frail and frail counterparts. Regression analyses, adjusted for age and gender, revealed variability associated with the vigilance aspect of sustained attention was strongly associated with pre-frailty ( $p < 0.001$ : OR = 1.10, 95 % CI: 1.06–1.15) and frailty ( $p < 0.001$ : OR = 1.21, 95 % CI: 1.13–1.30). Variability associated with the arousal aspect also increased the risk of pre-frailty ( $p < 0.05$ : OR = 1.03, 95 % CI: 1.01–1.05) and frailty ( $p < 0.05$ : OR = 1.08, 95 % CI: 1.04–1.13).

**Discussion:** Greater sustained attention variability was strongly associated with pre-frailty and frailty in the older adult population. It may provide a novel, objective and modifiable cognitive marker of frailty risk.

## P9

### The Value of Brain Natriuretic Peptide (BNP) in Predicting the Result of Tilt Table Testing in Older Patients

Graham Sutton<sup>1</sup>, Raja Hussain<sup>2</sup>

<sup>1</sup>St James University Hospital, Leeds, UK, <sup>2</sup>Pinderfields General Hospital, Wakefield, UK

**Introduction:** Tilt table testing is used in the investigation of syncope, however it is labour and time-intensive. Brain Natriuretic Peptide (BNP) has been suggested as a marker to help elucidate the cause of the syncopal episode (Tanimoto K et al., Am J Cardiol 2004 93:228). The aim of the overall study was to determine whether BNP could predict the outcome of a tilt table test and therefore possibly reduce the need for tilt table testing in some patients. The results of the participants aged 65 years and older are presented here.

**Methods:** All patients who fulfilled the indications for tilt table testing who presented to the syncope clinic were potentially eligible for the study. Patients were excluded if they did not/could not give written consent to participate or had a medical condition that has been associated with a raised BNP level. A blood sample to measure BNP was taken in the supine position 15 min after the tilt table test had finished and when the participant's heart rate and blood pressure were normal for them.

**Results:** 25 older patients were eligible for analysis during the study period of which 52 % were male. The median age of the subgroup was 77 years (range 65–86). 15 patients had a positive tilt test as per European Society of Cardiology guidelines—all had a vasodepressor response. The mean BNP level for patients with a positive tilt table test was 40.3 pg/ml (95 % confidence interval (CI) 26.08–54.52), whilst the mean BNP level for patients with a negative tilt table test was 34.6 pg/ml (95 % CI 17.46–51.74). There was no statistical difference between the two groups ( $p = 0.55$ ).

**Discussion:** BNP level by itself is not helpful when attempting to predict whether a tilt table test will be positive in an older patient with unexplained syncope.

## P10

### Post Stroke Shoulder Pain: Prevalence and Rates of Detection on an Acute Stroke Service

Kirstyn P James, Mohd Fadhli Karim, Subhasish Sengupta

*Our Lady of Lourdes Hospital, Drogheda, Ireland*

**Introduction:** Post stroke shoulder pain (PSSP) occurs in up to 30 % of patients due to various causes, ranging from rotator cuff abnormalities and joint subluxation to neuropathic pain. PSSP restricts upper limb function and can limit rehabilitation, increasing length of stay and reducing quality of life. This study aimed to assess prevalence and detection by healthcare providers of PSSP.

**Methods:** A point prevalence study was conducted on the acute stroke and stroke rehabilitation ward. All patients with hemiparesis who were able to communicate pain were included. Medical records and nursing notes were reviewed to assess whether presence or absence of PSSP



was documented. Patients were then interviewed following informed consent to establish whether PSSP was present. 15 patients (9 male, 6 female) were included (mean age: 76 years  $\pm$  8.7). 66.6 % (n = 10) had a left hemiparesis and 33.3 % (n = 5) had a right hemiparesis. All patients had impaired upper limb function.

**Results:** 20 % (n = 3) of patients (3 male; 0 female) reported PSSP. In 2 cases, there was no documentation of PSSP. One patient who had PSSP documented by their occupational therapist 32 days following stroke, subsequently underwent X-ray and MRI shoulder (both normal) and was treated with analgesia, shoulder positioning, range of motion exercises and a supportive device. Absence of PSSP was not documented for any patient.

**Discussion:** This study highlights that PSSP is often under-recognised. Detection of PSSP in this study prompted investigation and treatment. Given its prevalence, healthcare providers should enquire regularly about the presence/absence of PSSP in order to minimise complications.

## P11

### Prevention of Post Stroke Shoulder Pain on an Acute Stroke Service

Kirstyn P James, Mohd Fadhli Karim, Subhasish Sengupta

*Our Lady of Lourdes Hospital, Drogheda, Ireland*

**Introduction:** Post Stroke Shoulder Pain (PSSP) occurs in up to 30 % of patients with hemiparesis. PSSP may limit rehabilitation resulting in prolonged hospital stay and reduced quality of life, thus prevention is preferable. This study aimed to assess the use PSSP prevention measures on an inter-disciplinary stroke service.

**Methods:** A retrospective cohort study was conducted on an acute stroke and stroke rehabilitation ward. All patients with hemiparesis were included. Medical records and nursing notes were reviewed to establish if PSSP prevention was used. 34 patients were eligible for inclusion. 16 patients (10 male, 6 female) had a stroke with hemiparesis (11 left, 5 right) and were included (mean age 75.5 years  $\pm$  8.6). All patients had impaired upper limb function.

**Results:** 100 % (n = 16) of patients were receiving physiotherapy and had been prescribed upper limb range of motion exercises. 100 % (n = 6) of patients were receiving occupational therapy for upper limb function. 43.7 % (n = 7) were documented as receiving shoulder positioning. 0 % of patients (n = 0) were using shoulder support devices prophylactically. 3 patients developed PSSP despite preventive measures. One patient underwent plain X-ray of the shoulder and MRI shoulder, both of which were normal, and was subsequently prescribed a shoulder support device.

**Discussion:** We found satisfactory rates of physiotherapy and occupational therapy techniques to prevent PSSP. Less than 50 % of patients had been prescribed and were formally documented as receiving positioning techniques to prevent PSSP. This study highlights the importance of the use of measures to prevent PSSP.

## P12

### Use of Patient Identification Wristbands in an Irish Emergency Department

Kirstyn P James, Jennifer Yates, Dervla Connaughton, Subhasish Sengupta

*Our Lady of Lourdes Hospital, Drogheda, Ireland*

**Introduction:** Accurate patient identification is essential in reducing medical errors, with international healthcare systems recommending 100 % compliance with identification wristbands as a goal to improve patient safety. This is of particular importance in the over 65 age group, where delirium and confusion are common and non verbal methods of identification are essential. Overcrowding in the emergency department (ED) can result in reduced compliance. This audit aimed to assess compliance rates with this identification system and also the proportion of patients who were correctly identifiable in the ED compared to wards.

**Methods:** A point prevalence audit was conducted in a tertiary referral centre. The audit included all medical and surgical wards as well as the ED. All patients present on the ward at the time of audit were included. The presence of an identification wristband was assessed along with whether there were adequate and correct details (legible with 3 forms of identification, usually name, date of birth and hospital number).

**Results:** 215 patients were included. Twelve wards (6 surgical, 5 medical, 1 ED) were assessed. 18.6 % (n = 40) of patients were in the ED. Overall hospital compliance with printed, 3 forms of identification wristbands was 80 % (n = 171). On the medical and surgical wards, 91.5 % of patients were wearing correct wristbands. In comparison, compliance rates in the ED were only 45 %.

**Discussion:** This audit demonstrates the challenges in achieving patient safety goals, particularly in the ED. Increased availability of printers, the timing and location of where wristbands are applied may all lead to improved compliance.

## P13

### Occlusion of the Artery of Percheron: A Case of Bilateral Thalamic Stroke

Kirstyn P James, Orla Sheehan, Stuart KK Lee, Ciaran F Donegan

*Beaumont Hospital, Dublin, Ireland*

**Introduction:** The Artery of Percheron (AoP) is a rare variant of thalamic vascular supply, consisting of a single artery that supplies both thalami. The mean of patient presentation is 61 years with a male preponderance. We present a case report of AoP occlusion from embolic disease in a female patient, causing bilateral thalamic infarctions.

**Methods:** An 81-year old female (found unresponsive), with a history of atrial fibrillation (previously on Dabigatran, a direct thrombin inhibitor), hypertension, Left Atrial Appendage Occlusion device implantation, presented to the Emergency Department with left hemiparesis, reduced sensation and inattention. Her Glasgow Coma Scale was 7/15 (E = 1/M = 4/V = 2), BP = 60/40 mmHg, HR = 50 bpm. Intravenous thrombolysis was not administered as there was uncertainty regarding the time of onset. Dabigatran was discontinued 5-days prior to this presentation due to a recent upper gastrointestinal bleed.

**Results:** CT Brain showed no acute haemorrhage/infarction. CT Angiogram showed patent intra/extracranial vessels. MRI Brain with Diffusion Weighted Imaging revealed acute infarction of the median aspects of both thalami and midbrain. MR Angiogram showed patent cerebral vessels (basilar artery included). These findings were consistent with occlusion of an Artery of Percheron. An electroencephalogram showed diffuse slowing of delta/theta waves, indicating global cerebral disturbance. Her GCS fluctuated ( $^9/_{15}$  at best) and despite best medical management/enteral nutrition, she made minimal functional recovery and passed away 7 weeks later.

**Discussion:** This case highlights a rare anatomical variant in cerebral vascular supply and an uncommon presentation of stroke and should

be considered in a stroke patient presenting with reduced level of consciousness.

## P14

### 'Pregnancy' in the Acute Geriatric Unit

Helen O' Brien, Shaun T O' Keeffe

*Merlin Park Hospital & University College Hospital Galway, Galway, Ireland*

**Introduction:** Delusions of pregnancy mainly occur in younger women with schizophrenia and other psychotic disorders. In the only previous study of this condition in older women, (Harland and Warner, *Int J Geriatr Psych*, 1997), three of five cases presenting to a department of old age psychiatry had dementia, one had mania and one psychotic depression; all had 'distended abdomens'.

**Methods:** This study reports the findings in six women (age range 76–89 years) with delusions of pregnancy presenting to an acute geriatric unit.

**Results:** None of these women had a history of this symptom and all had had children. Five patients had dementia (one Alzheimer's disease, two vascular, one mixed and one associated with Parkinson's disease); three, including the only patient with no prior cognitive impairment, were delirious. Two patients had abdominal pain and two had diarrhoea. All had severe constipation on rectal examination. Two women reported they were in labour, while two complained that the baby wasn't kicking. One saw the pregnancy as punishment for unspecified sins, three were neutral and two were delighted. All received stool softeners and enemas, and one required a manual disimpaction. Only one patient needed antipsychotic medications. The delusion lasted 1–4 days, generally resolving with resolution of the constipation. In one case, a large evacuation of faeces resulted in a new delusion of having delivered a baby.

**Discussion:** Acute onset of delusions of pregnancy in older women warrants a rectal examination rather than a pregnancy test and treatment of constipation rather than antipsychotic medication.

## P15

### An Evaluation of Client Satisfaction Following a Period of Rehabilitation in the Community Reablement Unit

Emily Adamson<sup>1</sup>, Tara Cusack<sup>2</sup>, Miriam Casey<sup>3</sup>, Catherine Blake<sup>2</sup>

*<sup>1</sup>Our Lady's Hospice, Dublin, Ireland, <sup>2</sup>University College Dublin, Dublin, Ireland, <sup>3</sup>St. James's Hospital, Dublin, Ireland*

**Introduction:** The Community Reablement Unit (CRU) opened in 2003 as the first unit of its kind in the Republic of Ireland to provide step-up rehabilitation to community dwelling older people. The unit aims to maximise patients' safety, functional independence and mobility to enable continued community living. Client satisfaction is an important indicator of the quality of health care received. This study examined client satisfaction following a period of rehabilitation in the CRU.

**Methods:** A single centre prospective study was undertaken between April and October 2008. All individuals admitted to the CRU (n = 159) were asked to participate. At discharge clients completed a Client Satisfaction Questionnaire (CSQ-8) (Larsen et al. 1979). Two additional questions were included to obtain qualitative data asking (i) in which areas clients felt they had made the most improvement and (ii)

the best aspect of their admission. Descriptive statistics were used to examine CSQ-8 scores. The additional questions were analysed using a grounded theory approach whereby common themes were identified. Results: The CSQ-8 was completed at discharge by 137 clients. The median score was 31 (maximum score = 32) indicating a high level of satisfaction with the CRU programme. Clients identified physical function (n = 52), general wellbeing (n = 24) and psychological improvement (n = 14) as the most common areas of improvement. Staff and the care provided (n = 55) and physiotherapy/exercise (n = 36) were the most commonly reported best aspects of admission.

**Discussion:** The CRU is an innovative unit that aims to maintain older people in the community. Obtaining the clients perspective is a vital component in evaluating rehabilitative services. The study population reported a high level of satisfaction with the CRU service.

#### References:

Larsen DL, Attkisson CC et al (1979) Assessment of client/patient satisfaction: development of a general scale. *Eval Program Plann* 2:197–207.

## P16

### Polypharmacy and Agents Increasing Falls Risk: An Audit of Prescribing Practice Among Patients in Interim Care

N Hannon, EC Callaly, C Dowling, S McBride, S Saquib, M Day, D Power, CW Fan

*Synge Unit & Department of Medicine for Older Persons, Mater Misericordiae University Hospital, Dublin, Ireland*

**Introduction:** Specific agents implicated in falls include benzodiazepines, antidepressants and antipsychotic agents. Prescribers of these agents may be unaware of the association with falls. Our aim was to examine the prescription pattern of these agents in a group of medically stable patients awaiting discharge.

**Methods:** We collected data on consecutive patients in an interim care unit over 2-month period (repeated fortnightly until discharge). Variables recorded included age, falls history, cognitive impairment, dependency level, number and type of medications (antipsychotic, antidepressant, sedative or sedative analgesia).

**Results:** Of the 53 patients, 26 (19.1 %) were female, mean age was 75.7 years (range 40–95 years). 83 % of the sample was ≥65 years. 48.9 % had cognitive impairment, 32.1 % had a history of falls in the preceding year. Two-thirds (<sup>34</sup>/<sub>51</sub>) were independent in mobility and transfer. Changes were made to 4 original prescriptions, none had an agent discontinued.

75 % (<sup>40</sup>/<sub>53</sub>) of the sample were on at least one anti-psychotic, antidepressant, sedative or sedating analgesic at first assessment. 45 % were prescribed hypnotic agents, 40 % prescribed sedative analgesia. 8 patients were on a combination of sedative analgesia with an additional sedative (15.1 %).

Patients younger than 65 years of age were more likely to be prescribed 3 or more agents: 66.7 % (<sup>6</sup>/<sub>9</sub>), p < 0.001. Patients with cognitive impairment were more likely to be prescribed 2 or more agents (<sup>15</sup>/<sub>22</sub>, 68.2 %, p = 0.005). A history of falls in the preceding 12 months did not impact upon the numbers of medications prescribed: 11 % (<sup>1</sup>/<sub>9</sub>) were on 3 or more medications.

**Discussion:** We demonstrated high prescription rates of agents potentially increasing falls risk in patients who were medically stable awaiting discharge. Polypharmacy was prominent, particularly in those with cognitive impairment. We encourage regular reassessment of prescribed medications in interim care, highlighting the association of certain medications with falls risk.

## P17

### Inpatient Mortality in an Acute Medicine for the Elderly Service: A Retrospective Analysis

Sinead Evans, Diarmuid O'Shea, Kit Mun Tan, Graham Hughes, Morgan Crowe, Clodagh O'Dwyer

*Department of Medicine for the Elderly, St. Vincent's University Hospital, Elm Park, Dublin, Ireland*

**Introduction:** 30 day mortality among people admitted with acute medical problems can be as high as 12.6 %. This study analysed the characteristics and causes of mortality in our patient cohort of 1,479 admissions over a 2 year period admitted under a medicine for the elderly service involved in an acute unselected medical admissions rota. A dedicated stroke service is part of this service.

**Methods:** A list of in-patient deaths over this period was compiled from the Hospital Information Patient Enquiry (HIPE) system. Further Information was obtained from available hospital databases and General Practitioner (GP) correspondence letters.

**Results:** 116 patients (7.8 % of admissions, 72 (62 %) female) died, of whom 102 subsequent letters of GP correspondence were available for review. Mean age was  $83 \pm 9.2$  years (median 85, range 49–100). Source of admission was home 74.7 % ( $n = 86$ ), nursing home 19.1 % ( $n = 22$ ), hospital transfer 4.3 % ( $n = 5$ ) and off site rehabilitation 2.6 % ( $n = 3$ ). Mean length of admission was  $27 \pm 37$  days (median 12.5, range 1–253). Cause of death was unavailable in 14 (12 %) of cases. Stroke or stroke related complication was listed as primary cause of death in 50 (43 %) of cases and accounted for 65 % ( $n = 12$ ) of nursing home admissions. Other causes of death were pneumonia 18.1 % ( $n = 21$ ), dementia related illness 6.9 % ( $n = 8$ ), cancer 9.5 % ( $n = 11$ ) cardiac 4 % ( $n = 3.4$ ), and other 6.9 % ( $n = 8$ ). Median Length of admission was longest in those who developed a stroke related complication (30 days) and those with underlying dementia (35 days).

**Discussion:** Stroke and complications of stroke remain a high cause of inpatient mortality. Further work to look at the documentation of resuscitation status, timing of the recording of this in relation to when death occurred, and presence or absence of patient advance care plans would allow planning of better delivery of care to this patient group. The 19 % nursing home admission rate may reflect an on-going need and benefit for community and nursing home education and liaison services.

## P18

### Can the Assessment of Motor and Process Skills (AMPS) Be Used as a Predictor of Overall Safety in Community Dwelling Older People Admitted to a Rehabilitation Unit Within an Acute Hospital

Fiona Tobin<sup>2</sup>, Joan Brangan<sup>1</sup>

<sup>1</sup>Trinity College, Dublin, Ireland, <sup>2</sup>Tallghat Hospital, Dublin, Ireland

**Introduction:** Occupational therapists often base estimates of home safety and recommendations for levels of assistance post discharge on assessment of functional abilities carried out in the clinical setting. The aim of this study was to examine the predictive value of the Assessment of Motor and Process Skills (AMPS, Fischer, 2003) for estimating home safety with older adults admitted to a rehabilitation unit of an acute hospital.

**Methods:** Fifteen participants (7 male, 8 females) were assessed using the AMPS, assessment of activities of daily living skills, 1–2 days prior to their discharge. Within 2–4 weeks of discharge, the participants were assessed at home using the Safety Assessment of Function & the Environment for Rehabilitation, Health Outcome Measurement and Evaluation (SAFER HOME, Chiu et al. 2006). To form a basis for comparison the AMPS was also re-administered in the person's home.

**Results:** Results indicated a strong negative correlation between hospital AMPS scores and the SAFER HOME scores, with higher AMPS scores on both the motor scale, ( $r = -0.696$ ,  $n = 15$ ,  $p < 0.01$ ) and process scale, ( $r = -0.629$ ,  $n = 15$ ,  $p < 0.05$ ) associated with lower SAFER HOME scores. Higher AMPS scores are suggestive of more efficient ADL performance (Fischer, 2003), while lower SAFER HOME scores are suggestive of a smaller number of safety concerns identified during assessment.

Paired samples t-test demonstrated no statistically significant change in AMPS motor scores between hospital ( $\bar{x} = 0.846$ ,  $SD = 0.86$ ) and home environments ( $\bar{x} = 0.783$ ,  $SD = 0.91$ ),  $t(14) = 0.688$ ,  $p = 0.688$  (two tailed).

There was also no statistically significant change in the AMPS process scores in the hospital ( $\bar{x} = 0.35$ ,  $SD = 0.62$ ) versus the home ( $\bar{x} = 0.55$ ,  $SD = 0.64$ ),  $t(14) = -1.377$ ,  $p = 0.19$  (two-tailed).

**Discussion:** Although the numbers involved in this study were small, the findings support the use of the AMPS as a tool to help predict functional performance in the home environment prior to discharge.

## P19

### Staying Steady: Inter-agency Partnership Initiative for Falls Prevention

Elizabeth Griffin<sup>1</sup>, Bernadette Rooney<sup>2</sup>, Chei Wei Fan<sup>3</sup>, Marian Glynn<sup>1</sup>, Laura Jane McGinley<sup>4</sup>, Andrew Murphy<sup>5</sup>

<sup>1</sup>Physiotherapy Department, St. Mary's Hospital, Dublin, Ireland, <sup>2</sup>Health Promotion Service, Health Service Executive, Dublin North East, Ireland, <sup>3</sup>Consultant Geriatrician, St. Mary's Hospital, Dublin, Ireland, <sup>4</sup>Sport and Recreation Service, Dublin City Council, Dublin, Ireland, <sup>5</sup>Physiotherapy Department, Health Service Executive, Dublin North West, Ireland

**Introduction:** Staying Steady (SS) is an interagency partnership initiative set up in 2010 that involves hospital and community physiotherapy services, Health Services Executive (HSE) Health Promotion Service and Local Sports Partnership. Funding for transport is provided through HSE Manager for Services for Older People. The service is designed to: Reduce the risk of falls and injuries; Maintain bone health; Enhance socialisation and peer support; Health Education Programme; Provide specialised transport.

**Methods:** Participants are recruited via referral to hospital or community physiotherapy services. Following screening, suitable participants are enrolled into a 10-weekly chartered physiotherapist delivered balance and strengthening programme and an educational programme. On completion, participants have the opportunity to take part in a follow-up 10-weekly exercise and socialisation programme led by a specialist fitness instructor in a community setting. Physiotherapy outcome measures include Berg Balance Scale (BBS), Timed Up- and-Go Test (TUG) and in a subset Functional Reach (FR). Participants are asked to evaluate the programme using a structured questionnaire.

**Results:** In 2011 52 patients (35 women) were recruited to SS,  $\frac{2}{3}$  were from the community and 80 % were 70–89 years. 37 % were

recurrent fallers. The median (IQR) BBS, TUG and FR were 41 (8), 20.6 (11.5) s and 14.5 (11.5) cm respectively. Of the 38 (73 %) who completed the programme, BBS and FR improved significantly [41 (8) to 47 (7),  $p < 0.0001$ ] and [14.5 (11.5) cm to 17.0 (11.8) cm,  $p = 0.010$ ]. Overall feedback from participants of the programme was ‘very good’.

**Discussion:** Staying Steady programme demonstrates effective interagency collaboration in delivery of falls prevention and is well received by older people. In 2011 there were significant improvements in balance and functional reach in those who completed the programme. Staying Steady demonstrates local integrated planning and commissioning of resources, and informs future implementation of falls prevention strategy at policy, organisational, individual and resource levels.

## P20

### Lost for Words: Right Place, Right Time! Endovascular Treatment of Stroke: A Case Report

Carmel Curran, Paul Mullane, Gerard Wyse, Noel Fanning, Paul Gallagher

*Cork University Hospital, Cork, Ireland*

**Introduction:** Intravenous thrombolysis is an evidence-based treatment for acute ischaemic stroke and is increasingly delivered in Irish hospitals. However, limitations to its use have lead to increased interest in novel endovascular approaches. We describe a case of successful endovascular thrombolysis in a patient in whom intravenous thrombolysis was contraindicated.

**Methods:** Case report.

**Results:** A 72 year old functionally independent gentleman presented to the emergency department with new-onset symptomatic atrial fibrillation. He was admitted for investigation, rate control and warfarin anticoagulation. Five days post-admission he developed an acute onset aphasia with right-sided face, arm and leg motor weakness (National Institute of Health Stroke Scale (NIHSS) = 16). CT brain scan at 22 min post-onset showed no acute infarct or haemorrhage. CT perfusion imaging at 67 min showed a perfusion mismatch in the left fronto-parietal region with no core infarct. CT angiogram showed a left periorolandic artery occlusion (M3 branch). INR was 5.3. Intravenous thrombolysis was not considered because of risk of haemorrhage. INR was reversed with prothrombin complex concentrates. Intra-arterial thrombolysis, thrombectomy and stenting began at 105 min. Recanalisation was achieved at 185 min with immediate clinical improvement (NIHSS = 0). Angiographic images pre and post endovascular intervention are presented. This patient made a full immediate recovery with an NIHSS of 0 and experienced no adverse events post intervention.

**Discussion:** Endovascular interventions such as intra-arterial thrombolysis and thrombectomy are potentially life-saving treatments in selected patients with acute ischaemic stroke. Such interventions are particularly useful in patients with contraindications to intravenous thrombolysis or large proximal thrombi.

In order to deliver such interventions there needs to be rapid recognition and assessment of stroke, urgent CT imaging and early liaison with neuroradiology services. However, availability of neuroradiology expertise is currently limited to selected centres. Access to these

interventions must be considered when planning national stroke service delivery.

## P21

### Timing of Investigations in Acute Stroke Patients: An Audit

Mary-Louise Gargan, Haswadi Hassan, James Mahon, Olivia Mahon

*Trinity College Dublin, Dublin, Ireland*

**Introduction:** Stroke is the third commonest cause of death and commonest cause of disability in Ireland. 24-hour CT brain is essential, as is rapid access to MRI and imaging of carotid arteries when appropriate. We reviewed timing and results of carotid dopplers (pre or post CT brain report), and timing of MRI post normal CT brain, as well as the proportion of patients admitted to our stroke unit. **Methods:** Data was collected on new stroke patients coming under the care of our stroke team during 7 weeks in 2012, including admission date, symptoms, investigations, results, and whether the patient was admitted to the stroke unit.

**Results:** 22 patients; average age 69 (SD 24.7). All had admission CT brains. 59 % had dopplers, of which 30.7 % were positive. 76 % of dopplers were requested post-CT report, of which 40 % were positive; 24 % requested pre-CT report of which all were negative. 68 % of patients had MRI of which all were positive. MR following normal CT occurred in an average of 4.9 days (SD 2.82). 2 cases of normal CT brain didn't have an MRI. 40 % of patients were admitted to the stroke unit.

**Discussion:** St. James's Hospital provides timely access to investigations in stroke. However, 24 % of carotid doppler requests were potentially unnecessary, and only 40 % of strokes were admitted to the stroke unit. We propose ED staff be provided guidelines on stroke investigation to avoid inappropriate tests, and that admission guidelines reflect the need for patients to be admitted to the stroke unit.

**References:**

Irish Heart Foundation Council for Stroke National Clinical Guidelines. Recommendations for the care of people with stroke and transient ischaemic attack.

North American Symptomatic Carotid Endarterectomy Trial 30/11/00.

## P22

### Are Older Persons on Warfarin Adequately Anticoagulated? An Audit of a Dedicated Warfarin Clinic for Older Persons

Avril Travers, Niamh Hannon, Elizabeth Callaly, Derek Hayden, Joseph Duggan, Lorraine Kyne, Chie Wei Fan

*Department of Medicine for the Older Person, Mater Misericordiae University Hospital, Dublin, Ireland*

**Introduction:** Adjusted-dose warfarin to achieve an International Normalised Ratio (INR) between 2.0 and 3.0 reduces stroke risk by 60 % in patients with non-valvular Atrial Fibrillation (AF). Maintaining patients within therapeutic range is challenging. Community



studies demonstrate patients spent only half of the time in therapeutic range. We hypothesized that in older patients targeting therapeutic INR is challenging but achievable, and aimed to evaluate the control of INR in community-based patients attending a dedicated anticoagulation clinic for older persons.

**Methods:** Data was collected on consecutive patients attending the warfarin clinic in a Day Hospital for Older Persons over a 4-month period. Demographics recorded included age, sex, and indication for anticoagulation. All INR values were recorded per patient (excluding first three on commencing anticoagulation), and percentage of INR values within 2.0–3.0 was calculated.

**Results:** 102 patients attended the anticoagulation clinic within the study period (68 % female). Age ranged from 69 to 94 years (median 84). Over 4 months, patient had a median of 4 INR tests (range 2–18). 92 % were anticoagulated for stroke prevention in non-valvular AF ( $^{93/102}$ )—76 % ( $^{71/93}$ ) for primary stroke prevention. Of 102 patients, one-third ( $^{32/102}$ ) achieved therapeutic INR 50–74 % of the 4-month period, with 30 patients (29 %) achieving target 25–49 % of the time. 20 (19.6 %) were in therapeutic range for 100 % of the time.

For all INR values (AF only:  $n = 767$ ), over half (54 %,  $n = 415$ ) were 2.0–3.0. Of the values outside therapeutic range, 19 % (146) were supra-therapeutic (INR  $>3.0$ , median 3.7) and 27 % were sub-therapeutic (median 1.7). Age did not correlate with control of INR.

**Discussion:** In an older population at high risk of stroke, a dedicated warfarin clinic achieves target INR control over 50 % of the time, similar to international studies. For vulnerable older people, it is important to target and monitor anticoagulation appropriately to ensure safe and effective stroke prevention.

## P23

### Bones Beyond 70: Characteristics of Elderly Patients Referred to a Bone Health Clinic

Mohamed Ahmed, Ebtihal Babiker, Bridie Rooney, Berni McGowan, John Doherty

Sligo General Hospital, Sligo, Ireland

**Introduction:** The incidence of osteoporosis is increasing as the population ages. Less than one-third of patients who have had fragility fractures are appropriately evaluated.<sup>1</sup> The rates of diagnosis are even lower among those who have not yet had a fracture. The aim of this study was to characterize a cohort of elderly patients attending our Bone Health Service.

**Methods:** Data was collected for all patients over 70 attending the Bone Health Service at the General Hospital (SGH) for DXA scan. Patients-related information were recorded on the DXA dataset which was used for this study.

**Results:** Between October 2007 and February 2012, a total of 1,340 patients aged  $>70$  were referred to our clinic, 76.4 % were females. The mean age for females was 77.7 years and that for males was 78.3 years. 51 % of all requests for BMD testing came from Sligo General Hospital medical consultants, followed by GP referrals (20.8 %). Referrals from the Ortho-geriatric service and the fracture clinic accounted for 10.1 and 5.9 % respectively. History of low trauma fracture was the commonest indication for referral (22 %). 26.8 % of all patients had a history of at least one fragility fracture. 50 % of our elderly cohort had osteoporosis (55.6 % of females and 31 % of males). Compared to those with normal BMD, older patients with osteoporosis were shorter (158.6 vs. 166 Cm,  $P < 0.001$ ), had a

lower weight (62.7 vs. 81.0 kg,  $P < 0.001$ ) and a lower BMI (24.8 vs. 29.4 cm<sup>2</sup>/kg,  $P < 0.001$ ). Nearly 40 % of the rest were osteopaenic and only 10 % had a normal BMD.

**Discussion:** 1 in 2 women and 1 in 3 men age  $>70$  referred to our bone health clinic had osteoporosis—most of them did not have a history of previous fracture. Screening of this vulnerable group, irrespective of their risk factors, is essential to prevent future fractures.

## P24

### Total Body DXA Scanning in a Study of Sarcopenia, Disability and Fracture Risk in a Cohort of Inflammatory Arthritis Patients Attending a Rheumatology Unit

Mohamed Ahmed<sup>1</sup>, Sharon Cowley<sup>1</sup>, Mohammed Hussein<sup>2</sup>, John Doherty<sup>1</sup>, Carmel Silke<sup>2</sup>, Brian Whelan<sup>2</sup>

<sup>1</sup>Sligo General Hospital, Sligo, Ireland, <sup>2</sup>Rheumatology unit, Manorhamilton, Sligo., Ireland

**Introduction:** Sarcopenia is defined as a progressive and generalised loss of skeletal muscle and strength either age or disease activity related or both.<sup>1</sup> The aim of this study was to assess sarcopenia in inflammatory arthritis (IA) by whole body DXA studies and measurement of muscle function and strength.

**Methods:** Patients attending the Rheumatology Unit were invited to participate in this study. Sarcopenia was quantified as appendicular skeletal mass divided by height squared (ASM/H<sup>2</sup>) and considered present if the figure was two standard deviations below the mean for a population of young. Upper limb grip strength was measured using a hand held dynamometer and muscle function was assessed with the 'Get Up and Go' Test.

**Results:** 44 subjects were studied (24 IA patients and 20 controls). There was no significant difference between the two groups concerning age, gender, weight, height and BMI. The mean age of the study group was 65.2 years and the mean of the control group was 61.9 years. 20 % of patients in the IA group had Sarcopenia compared to none of the controls. Muscle function was also considerably reduced in those with IA. The mean maximum dominant arm grip strength for IA patients was 7.96 kg compared to 11.45 kg for the controls ( $p = 0.002$ ). Health Assessment Questionnaire score was much lower in the IA group and reduced ASM/H<sup>2</sup> and grip strength correlate to a reduced HAQ score; ( $p = 0.006$  and  $0.001$ ). 20.8 % of the IA patients had a previous fracture compared to 5 % of the control group. The mean FRAX<sup>®</sup> major osteoporotic fracture risk for the IA group was 16.1 compared to 7.28 for the control group ( $p = 0.004$ ).

**Discussion:** Sarcopenia is more prevalent in IA patients and is associated with reduced muscle strength and quality of life. Patients with IA have an increased incidence of fractures compared to healthy individuals despite similar BMD profile.

## P25

### Assessing Fracture Risk in Patients Who Fall: A Comparison of FRAX<sup>®</sup> and NICE Guidelines

Laura Cook, Graham Sutton



St James' University Hospital, Leeds, Yorkshire, UK

**Introduction:** Patients who fall need to be assessed for fracture risk. The National Institute for Clinical Effectiveness (NICE) provides guidance on primary and secondary prevention of osteoporotic fracture. Risk calculation tools, such as the World Health Organisation Fracture Risk Assessment tool (FRAX<sup>®</sup>) may underestimate the risk of fracture in patients who fall.<sup>1</sup> We compared the recommendations from both models when applied to our patients who fall and observed for differences.

**Methods:** Patients seen in specialist falls clinics between September 2011 and March 2012 were reviewed. Data on patient demographics; risk factors for fracture/low bone mineral density and those required to use FRAX<sup>®</sup> were collected. Those >90 years, already taking bone protection, or who had never fallen were excluded.

**Results:** Complete data from 106 patients (mean age of 79.3 years) was analysed.

Of the 70 patients assessed for primary prevention, NICE guidance recommended immediate treatment for only one patient. This patient was deemed intermediate risk by FRAX<sup>®</sup>. Of the other 69 patients, FRAX<sup>®</sup> recommended dual energy X-Ray absorptiometry (DXA) scans in 15 patients. NICE advises an assessment of fracture risk for these patients, but does not recommend DXA scanning specifically.

Of the 36 assessed for secondary prevention, 28 could receive immediate treatment under NICE with the rest being offered a DXA scan. FRAX<sup>®</sup> identified only 2 patients as high risk and these patients would not have received immediate treatment under NICE guidance. FRAX<sup>®</sup> advised DXA scanning for 23 patients, and no treatment for 11.

**Discussion:** In patients who fall, there is no significant difference between NICE guidance and FRAX<sup>®</sup> in immediate bone protection for primary prevention.

Fewer patients would be prescribed bone protection for secondary prevention if FRAX<sup>®</sup> is used instead of NICE guidance.

#### References:

<sup>1</sup> Masud T, Blinkley N, Boonen S et al. (2011) J Clin Densitom 14(3): 194–204.

## P26

### Fear of Falling in an Older Irish Population: Prevalence and Psychosocial Predictors

Hilary Cronin, Claire O'Regan, George Savva, Orna Donoghue, Patricia Kearney, Rose Anne Kenny

Trinity College Dublin, Dublin, Ireland

**Introduction:** Fear of falling (FOF) is an important and common syndrome affecting older adults. FOF may lead to activity avoidance, functional decline, restriction of social participation, decreased quality of life, increased risk of falling and institutionalisation. The reported prevalence of FOF in community-dwelling older persons ranges from 20.8 to 85.4 %, however there is a lack of nationally representative data. The link between anxiety and FOF merits attention as it is possible that these two conditions are two different manifestations of the same disease.

**Methods:** A nationally representative sample of 8,166 adults aged ≥50 years took part in wave 1 of The Irish Longitudinal Study of Ageing (TILDA). Structured interviews were conducted in the respondents' homes using computer-aided personal interviewing (CAPI). FOF was measured by asking respondents "Are you afraid of falling?" Respondents self-reported the number of falls experienced

over a 12 month period. Depression was assessed using the CES-D 20 and anxiety using the HADS-A. Generalised fear was captured as part of the CES-D.

**Results:** Mean age 63.83 ± 9.79. The overall prevalence of FOF was 23.3 % and increased with age. At all ages FOF was more prevalent in women than men. Multivariate associations of FOF were female gender (OR 2.81), older age (OR 2.63), anxiety (OR 1.91), poor self-rated health (OR 1.74), generalised fear (OR 1.81), higher number of chronic conditions (OR 2.10) and history of falls (OR 2.69).

**Discussion:** FOF is independently associated with many socio-demographic, psychological and physical health status measures. Given its prevalence and importance, questions to assess FOF should be incorporated into the clinical assessment of all older adults.

## P27

### Older Patients Awareness of Stroke: The Impact of the "Act F.A.S.T." Stroke Campaign

Niamh Peters<sup>1</sup>, Mike O'Connor<sup>2</sup>

<sup>1</sup>University College Cork, Cork, Ireland, <sup>2</sup>Cork University Hospital, Cork, Ireland

**Introduction:** Every minute of acute ischaemic stroke results in loss of 1.9 million neurons. Thrombolysis offers the potential for cure but rapid presentation to hospital to receive it is essential. Alteplase has recently been licensed up to 4.5 h. However, poor public awareness remains a barrier to thrombolysis. To combat this, the "Act FAST" stroke campaign was launched. The aim of this study was to assess the knowledge of stroke signs and symptoms amongst older patients and the impact of the FAST campaign in improving such knowledge.

**Methods:** This was a prospective qualitative study in an inner city GP practice. 102 consecutive patients over 65 years were interviewed and completed a questionnaire assessing their knowledge of stroke signs and symptoms. Patient demographics and stroke risk factors were recorded.

**Results:** 89.2 % of those surveyed could name 1 stroke risk factor and 60.8 % could name 2. Hypertension and smoking were the most commonly identified risk factors. 77.5 % could identify 1 warning sign of stroke but only 46 % could name 2. Face/limb weakness and slurred speech were the most commonly identified. Only 20.5 % of subjects had heard of the FAST campaign but 75.5 % had seen or heard advertisements about warning signs of stroke. 72.5 % of subjects knew to call 999 if they witnessed or experienced signs or symptoms of stroke.

**Discussion:** Over 75 % of the sample report being exposed to advertisements related to stroke warning signs. However, less than 50 % could identify 2 or more of these. This suggests that despite the FAST campaign, many people over 65 years will still fail to recognise the symptoms and signs of stroke. Other methods are therefore required to improve patient awareness, perhaps targeting healthcare professionals to encourage opportunistic education of patients.

## P28

### The Effect of Tooth Replacement Strategies on the Nutritional Status of Older Patients

Gerry McKenna, Finbarr Allen, Denis O'Mahony, Albert Flynn, Michael Cronin, Noel Woods

University College Cork, Cork, Ireland

**Introduction:** The oral health of older adults has changed dramatically in recent years. Instead of the traditional picture of elderly patients with no natural teeth, increasing numbers of patients are retaining teeth into old age (partially dentate). However, these patients still require treatment to replace missing teeth for functional and aesthetic reasons.

**Methods:** In order to assess the impact of two different tooth replacement strategies on the nutritional status of partially dentate older patients, a randomised, controlled, clinical trial (RCT) was designed. 132 patients  $\geq 65$  years with some natural teeth remaining were recruited to the trial. The patients came from Cork University Dental Hospital and St. Finbarr's Geriatric Day Hospital. They were randomly allocated to two treatment groups; conventional treatment where removable dentures were provided and functionally orientated treatment where strategic teeth were replaced with simple fixed bridges. The outcome measures used were impact on Oral Health related Quality of Life (OHRQoL) and impact on nutritional status. Nutritional status was measured using the Mini Nutritional Assessment (MNA) in addition to a series of haematological markers.

**Results:** 90 patients completed the RCT (68.2 %) and returned for 1 year follow-up. Both treatment groups demonstrated statistically significant improvements in OHRQoL 1 year after treatment intervention ( $p < 0.05$ ). The only nutritional measures which illustrated significant improvements in both groups were the MNA and Vitamin D levels ( $p < 0.05$ ). Markers including Vitamin B12, Folate, Ferritin, C-Reactive protein and Albumin levels did not illustrate significant improvements ( $p > 0.05$ ).

**Discussion:** In this study, patients did not demonstrate a consistent picture of improvement in nutritional status, regardless of treatment group. Tailored dietary advice provided in tandem with dental treatment may be required to ensure consistent improvements in nutritional status for partially dentate older patients.

## P29

### Audit of a Multidisciplinary Falls Risk Assessment Clinic in an Irish General Hospital: A Retrospective Analysis

Navya Basavaraju, Emma Groarke, Emer Ahern, Paul Cotter, Rory McGovern

St. Luke's General Hospital, Kilkenny, Ireland

**Introduction:** Falls in older people are a serious public health problem. One in three adults over 65 years of age fall every year. Falls can be predicted and prevented. A multifactorial assessment followed by targeted intervention for identified risk factors is the most effective strategy for falls prevention.

**Methods:** We provide a monthly falls risk assessment service. It is a multidisciplinary clinic. We retrospectively reviewed 85 patient records who attended the service from February 2010 to March 2012.

**Results:** 61 were females and 24 were males; average age of 78.3 years (48–94).

63 % of referrals were from General Practitioners, 20 % Consultant referrals, 12 % from Occupational Therapists and 5 % from Public Health Nurses. 40 % had more than 3 co-morbidities. Two-thirds were taking more than 4 medications. Three quarters reported recurrent falls, 34 % had postural symptoms, 27 % complained of

dizziness, 14 % had loss of consciousness and 8 % had syncope. 28 % had sustained abrasions and lacerations, 28 % fractures and less than 10 % had head injuries. 85 % of these falls happened inside the house while 42 % fell outside the house. Half of the patients had visual impairment. 38 % of patients had cognitive impairment. Physiotherapists saw 73 % of patients and 21 % had a Tinetti score of  $< 18$ . 48 % had Occupational therapist assessment. 88 % of patients had a further follow-up; 75 % were referred to Out-patient Physiotherapy, 44 % had further OT management, 35 % were referred to Gait and Balance class, 21 % were followed up in OPD and 3 % were referred to Falls and Blackout clinic.

74 (87 %) patients did not attend hospital during the following 3 months.

**Discussion:** Our audit highlights the multifactorial aetiology of falls and the use of a specialist clinic for targeting appropriate interventions. Further study is needed to explore the relationship between the falls clinic and hospital attendances.

## P30

### Facilitators and Barriers for Implementation of the Irish National Stroke Guidelines

Claire Donnellan<sup>1</sup>, Susannah Sweetman<sup>1</sup>, Emer Shelley<sup>2</sup>

<sup>1</sup>Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Royal College of Surgeons in Ireland, Dublin, Ireland

**Introduction:** The introduction of clinical guidelines have become a standard way of implementing evidence-based practice, however research indicates that health professionals do not always follow and adhere to those guidelines. There has been no documented evidence of health professionals' perceptions or the rationales they consider influential in implementing stroke guidelines in practice. This study aimed to assess stakeholders and health professionals perceptions working in the clinical setting what the facilitators and barriers are to implementing National Stroke Guidelines.

**Methods:** Qualitative interviews using focus groups were conducted with three stakeholders' groups and seven hospital multidisciplinary teams from the Dublin and South-east regions involved in stroke care. All focus groups' interviews were semi-structured using open-ended questions. Data was managed and analysed using NVivo 9 software.

**Results:** The main themes to emerge from focus groups with the stakeholders and the hospital multidisciplinary teams were very similar in terms of topics discussed. These main themes were resources, National Stroke Guidelines as a tool for change, characteristics of National Stroke Guidelines, advocacy at local level and community stroke care challenges. There were specific sub-themes that also emerged within the main themes and some examples of these were having specialised and dedicated staff and stroke units to stroke care management, using the guidelines as an audit tool, content related issues with guidelines, appropriate education and training, localised adaptation of guidelines and improving stroke community rehabilitation services.

**Discussion:** This study highlights health professionals' perspectives regarding many key concepts which may affect the implementation of stroke care guidelines. The introduction of stroke clinical guidelines at a national level is not sufficient to improve health care quality as they should be incorporated in a quality assurance cycle with education programs and feedback from surveys of clinical practice.

## P31

**Surveillance of 24 Hour Urinary Calcium in Patients Commencing Recombinant PTH (1–34) Therapy**

Elizabeth McCarron, Rosaleen Lannon, Miriam Casey

*Bone Health Clinic, Mercer's Institute for Research on Ageing, St James's Hospital, Dublin 8, Ireland*

**Introduction:** Recombinant Parathyroid Hormone Therapy (rPTH) has been available over the last decade for the treatment of severe osteoporosis. It decreases the risk of new vertebral fractures by up to 90 %. A side effect of rPTH therapy is the development of hypercalciuria and occasional hypercalcaemia. Neer reported an incidence of 6 % of hypercalciuria in patients on rPTH and Miller et al. an incidence of between 12 and 23 % in different studies.

**Methods:** We performed a retrospective review of consecutive patients on rPTH therapy. These patients were taken from the database of the Bone Health Clinic in St James's Hospital. We identified the first 30 patients who had paired 24 Hour Urinary Calcium (24UrCa) collections prior to rPTH therapy and within 6 months of commencing treatment.

**Results:** 28 Females and 2 males were identified. At baseline the mean 24UrCa for the group was  $4.8 \text{ mmol/24 h} \pm 0.48$  (SEM). Within the first 6 months of treatment, the mean 24UrCa had risen significantly to  $5.9 \text{ mmol/24 h} \pm 0.63$ . ( $P = 0.04$ , CI 2.2 to  $-0.05$ ). 12 out of the 28 females (43 %) developed hypercalciuria. None developed hypercalcaemia.

**Discussion:** There was a high incidence of Hypercalciuria occurring in almost half of the patients on rPTH (1–34). The incidence was higher than in other published studies although mild and asymptomatic. It is our practice to perform an abdominal X-ray prior to treatment with rPTH to identify pre-existing renal calculi as such patients might potentially be at risk of developing renal stones on treatment with PTH.

**References:**

Neer RM et al. *N Engl J Med* 2001; 344:1434–1441 Effect of Parathyroid Hormone (1–34) on Fractures and Bone Mineral Density in Postmenopausal Women with Osteoporosis  
Miller et al (2007) Occurrence of hypercalciuria in patients with osteoporosis treated with teriparatide. *J Clin Endocrinol Metabol* 92(9):3535.

## P32

**Internet Based Reminiscence Therapy (RT) for People with Cognitive Impairment: Does It Improve Mood, Cognition, Quality of Life (QoL), Engagement and Communication? A Pilot Study**

Klara Anderson<sup>1</sup>, Aisling Egan<sup>2</sup>, Roisin O'Grady<sup>2</sup>, Julia O'Rourke<sup>3</sup>, Ronan Collins<sup>3</sup>

<sup>1</sup>Peamount Healthcare, Dublin, Ireland, <sup>2</sup>Trinity College, Dublin, Ireland, <sup>3</sup>Tallaght Hospital, Dublin, Ireland

**Introduction:** To assess the benefits of delivering RT via multimedia for people with cognitive impairment.

**Methods:** A non-randomised controlled study with convenience sampling was undertaken using a qualitative and quantitative methodology. 17 clients attending the centre identified as having a mild-moderate cognitive impairment by the Mini-Mental State Examination

(MMSE), were allocated to study/control group based on the day they attended. MMSE, Dem-QoL, Functional Linguistic Communication Index (FLCI) and Geriatric Depression Scale (GDS) were completed with the study ( $n = 9$ ) and control ( $n = 8$ ) groups pre and post. Study group participants attended twelve sessions of RT. Blinded raters investigated engagement via the Menorah Engagement Scale at three time intervals. A specifically designed questionnaire was completed. Ethical approval was obtained from the St. James's Hospital/Tallaght Hospital Research Ethics Committee.

**Results:** Only 5 participants from each group were reassessed, due to illness/death. The Wilcoxon Signed Rank Test assessed for changes within each group in pre and post-intervention scores. Despite the study group scores showing an improvement in language ( $z = -0.137$ ,  $p = 0.891$ ), mood ( $z = -1.219$ ,  $p = 0.233$ ) and quality of life (QoL) ( $z = -1.490$ ,  $p = 0.136$ ) they were not statistically significant. In the control group there was a decline in all scores, although not statistically significant: MMSE ( $z = -0.542$ ,  $p = 0.588$ ), FLCI ( $z = -0.135$ ,  $p = 0.853$ ), DEM QoL ( $z = -1.625$ ,  $p = 0.104$ ), GDS ( $z = -1.089$ ,  $p = 0.233$ ). Mann-Whitney U (MWU) test was used to compare the post-intervention scores of each group. Scores in QoL, mood and communication were in favour of the study group but were not statistically significant: FLCI (MWU 12,  $z = -0.105$ ,  $p = 0.916$ ), DEM QoL (MWU 7,  $z = -1.156$ ,  $p = 0.248$ ), MMSE (MWU 9.5,  $z = -0.631$ ,  $p = 0.528$ ), GDS (MWU 8,  $z = -0.946$ ,  $p = 0.344$ ). The questionnaire results favoured RT. Study group participants demonstrated 100 % positive engagement by study completion.

**Discussion:** RT using multi-media is a suitable and valid tool for this population. Study group participants demonstrated more positive change in communication, QoL and mood than the control group. Although not statistically significant, this has clinical significance.

## P33

**Stroke Mimics: Beware of Endocarditis!**

Usman Khan, Marie O'Connor, Michael O'Connor

*Department of Geriatric Medicine, Cork University Hospital, Cork, Ireland*

**Introduction:** Neurological complications may be the presenting symptom in patients with endocarditis. The importance of establishing a specific cause in all cases of stroke is illustrated here.

**Methods:** Case studies.

**Results:**

Case 1: A 72 year old male presented with acute onset slurred speech and left arm weakness. He had no medical history or stroke risk factors. Investigations included CT brain (normal), ESR (normal) and ECG (sinus rhythm). MRI brain showed multiple large bilateral cortical infarcts. Consequently a trans-oesophageal echocardiogram (TOE) was performed and demonstrated vegetation on the aortic valve. A diagnosis of Infective Endocarditis (IE) was made and empirical antibiotic therapy commenced. Serial blood cultures were negative. The patients began to experience melena and gastroscopy demonstrated a thickened mucosa which was biopsied. In view of negative blood cultures in conjunction with gastroscopy findings, a diagnosis of Marantic Endocarditis was made. Imaging with CT showed multiple liver metastases and splenic and renal infarcts. Histology confirmed adenocarcinoma of G.I origin. The patient deteriorated rapidly and died 3 weeks after presentation.

Case 2: An 87 year old female presented with expressive dysphasia. She was afebrile, physical examination was notable for a diastolic murmur. CT brain showed only microvascular ischaemia. 3 sets of blood cultures were taken and empiric treatment commenced. Blood cultures grew *Enterococcus faecalis*. Trans-thoracic echo showed severe aortic regurgitation but no vegetation. TOE was not completed due to patient desaturation. Her hospital stay was complicated by an epidural abscess and discitis at L1/L2 and cardiac failure. She was treated successfully with intravenous antibiotics. 4 months following admission this lady was discharged home independent with activities of daily living.

**Discussion:** Endocarditis should be considered in all patients who present with stroke with red flag symptoms or signs.

## P34

### Health and Disease Incidence in Irish, Elderly Community-Dwelling Subjects: Baseline Findings From The ELDERMET Project

Eibhlís M. O'Connor, Paul W. O'Toole

University College Cork, Cork, Ireland

**Introduction:** The ELDERMET project is currently studying the interaction between the microbiota, diet and health in elderly subjects aged  $\geq 65$  years. Age-related changes in the composition of the human intestinal microbiota have been linked to adverse health conditions, including increased inflammation,<sup>1</sup> therefore it is important to identify the most prominent chronic medical conditions to provide the evidence-base upon which associations with the microbiota may be explored.

**Methods:** Chronic disease/medical condition incidence was examined among community-dwelling subjects (n 261; 119 male, 142 female), 67 of which were day hospital attendees. Functional Independence Measure (FIM) and Barthel Index were used to detect physical and cognitive disability was determined by the Mini Mental State Exam (MMSE). Chi-square tests were performed to determine differences between genders.

**Results:** Maximal functional independence was indicated among 77 and 49 % of subjects using the Barthel Index and FIM, respectively while 89 % of subjects had normal cognitive scores. Chronic cardiovascular conditions were among the most prevalent clinical illness with hypertension and hypercholesterolemia the most common disorders among both genders. Atrial fibrillation and cerebrovascular accident sequelae were present among 19 and 15 % of the cohort, respectively while ischemic heart disease was present in 14 %. Gender differences in chronic disease prevalence included myocardial infarction, ischemic heart disease, Parkinson's disease/tremors/dyskinesia and congestive heart failure, incidence of which were significantly higher among males ( $P < 0.05$ ), while osteoporosis, thyroid disorders, arthritis, diverticular disease/ulcerative colitis and anaemia/blood disorders had significantly higher prevalence among females ( $P < 0.05$ ). In addition, anxiety/depression and mood disorders were reported in a higher number of females (49 %) than males (10 %) ( $P < 0.001$ ).

**Discussion:** Despite good levels of functional ability, significant levels of disease and chronic medical conditions prevailed. Identification of associations between the microbiota and chronic disease prevalence could be a potential mechanism to promote healthy aging in elderly populations.

## P35

### The Effect of Time and Nasogastric Feeding on the Prevalence of Gastric Ulceration Prior to PEG Placement in Dysphagic Stroke Patients

Anna Brown<sup>1</sup>, Finbar McCarthy<sup>2</sup>, PWN Keeling<sup>2</sup>, Joseph Harbison<sup>1</sup>

<sup>1</sup>Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Department of Gastroenterology, St James's Hospital, Dublin, Ireland

**Introduction:** Dysphagia requiring artificial nutrition support, often by nasogastric (NG) feeding or percutaneous endoscopic gastrostomy (PEG), is a frequent complication of stroke. NG feeding is often replaced by PEG if the patient will not tolerate the NG tube and oral feeding is unlikely to be recovered in less than 4 weeks. We hypothesize that a time delay between the onset of dysphagia and PEG placement, and the presence or absence of an NG tube during this period, may correlate to the degree of gastric ulceration found during the PEG placement.

**Methods:** Data from all stroke patients who had undergone PEG 2009–2011 at St. James' Hospital were analysed for time between admission and PEG insertion, use of prior NG feeding and the presence and extent of gastritis, erosions or ulceration found on PEG insertion. Statistical analysis was performed using SPSS 19.0.

**Results:** Data from 75 patients were analysed, 38 (50.67 %) were female, median age 81 years (28–97 years). 61 (81.3 %) patients received an NG tube prior to PEG placement. 26 (34.67 %) patients had no reported gastric findings, 21 (28 %) had mild gastritis, 19 (25.3 %) had moderate gastritis and 1 (1.3 %) had severe gastritis. 5 (6.7 %) patients had reported erosions and 3 (0.04 %) patients had ulceration. No correlation was found between patients' age and time delay between onset of dysphagia and PEG placement ( $r = 0.021$ ,  $p = 0.862$  pearson's rho) or between age and any gastric lesions ( $r = -0.76$ ,  $p = 0.516$  pearson's rho). There was also no correlation between the presence of any gastric lesions and the time delay between onset of dysphagia and PEG placement ( $r = -0.004$ ,  $p = 0.972$  spearman's rho).

Prior NG feeding did not predispose to the development of gastric lesions ( $X^2 = 0.56$ ,  $p = 0.45$ ).

**Discussion:** Delay to PEG feeding and prior use of NG tube feeding is not associated with increased gastric ulceration.

## P36

### Potential Benefit of Implementing a Higher Dose Statin Regimen in Subjects Stroke and TIA: How 'SPARCLy' are Our Patients?

Zarheen Allam, Joseph

Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland

**Introduction:** The SPARCL Study was the first direct evidence that aggressive cholesterol lowering is associated with lowered risk of recurrent stroke and TIA. SPARCL found a reduction in mean LDL cholesterol is associated with an absolute reduction in stroke of 0.44 % and in cardiovascular events of 0.7 %. Mortality was not affected. We performed an audit of patients to determine how they



compared with subjects in SPARCL and to estimate the potential benefit in increasing their statin to Atorvastatin 80 mg/day.

**Methods:** Data on demographics, statin prescription and lipid levels were reviewed on 100 consecutive patients attending the clinic. Average LDL and total cholesterol values were recorded for the population.

**Results:** Mean age in our group tended to be higher than in SPARCL [66.3 years vs. 62.7 (95 % CI of difference  $\pm 3.8$  years)]. 76 of our group were already prescribed a statin at presentation, 56 were prescribed Atorvastatin. Only 4 of these were prescribed 80 mg/day (median 20 mg). Mean LDL cholesterol for the whole population, excluding those on Atorvastatin 80 mg, was 93.6 mg/dl (treated: 85.2 mg/dl, untreated 115.8 mg/dl). Mean Total Cholesterol at presentation was 161.1 mg/dl in our group and 211.4 in the SPARCL trial. Assuming a target LDL cholesterol level of the SPARCL treatment average of 72.9 mg/dl our population could achieve a mean reduction of 20.7 mg/dl or 34.6 % of that achieved in SPARCL. Our treated group, could only achieve a reduction of 20.5 % of that achieved in the SPARCL treatment group. Accordingly, potential benefit for increasing all subjects to a dose of Atorvastatin 80 mg may be as low as 1.5 events/1,000 years reduction in stroke incidence and a 2.4 events/1,000 events reduction in cardiovascular event.

**Discussion:** In our population the potential cardiovascular benefit of optimising statin therapy to Atorvastatin 80 mg/day in all patients is even smaller than the modest effects achieved in SPARCL.

## P37

### Multidisciplinary Team Meetings in a Residential Care Setting for Older People

Alison O'Brien<sup>1</sup>, Catherine Sweeney<sup>2</sup>

<sup>1</sup>University College Cork, Cork, Ireland, <sup>2</sup>St Patrick's University Hospital/Marymount University Hospice, Cork, Ireland

**Introduction:** The benefits of a multidisciplinary team (MDT) approach to the care of older people have been highlighted in both acute and residential care settings. Good communication and planning is key to effective MDT work. Regular MDT meetings were established in our 63 bed residential care setting for older people in May 2009. Meetings last approximately 45 min. The disciplines represented at meetings are medical, nursing, physiotherapy, pharmacy and day activities manager. We reviewed activity over a 3 year period and sought feedback from staff on the meetings.

**Methods:** Records of all MDT meetings held were systematically reviewed. A questionnaire exploring attitudes to MDT meetings was distributed to all MDT staff.

**Results:** Over the 75 meetings reviewed, the following disciplines were in attendance: medical 93 %, nursing 89 %, physiotherapy 90 %, pharmacy 38 % and activities nursing 70 %. In total 178 cases (usually 2–3 per meeting) were discussed. 35 questionnaires were distributed and 24 (68.5 %) were completed and returned. 22 of these had attended a MDT meeting. 21 (95.4 %) of the 22 agreed or strongly agreed they were professionally satisfying and helped them to view the resident more holistically. The most important benefits of meetings were identified as enhanced resident care and improved appreciation of multidisciplinary teamwork. The most negative aspect for nursing and medical team members was time pressure and for other disciplines was the desirability for more time to be spent on meetings. Areas highlighted for improvement included changing time of meeting, encouraging attendance by healthcare assistants, and more forward planning of cases for review.

**Discussion:** Staff perceive that MDT meetings improve patient care and multidisciplinary teamwork but time required to hold meetings is an issue.

## P38

### Mitochondrial Cytopathy Rehabilitation: A Single Case Study

Sarah O'Callaghan, Miriam McDonnell, Sinead Coleman

St. James's Hospital, Dublin, Ireland

**Introduction:** Mitochondrial cytopathies occur when energy production in mitochondria is disrupted through genetic mutations or as a result of aging. They are difficult to diagnose due to variability of symptoms and insidious onset.<sup>1</sup> This study aims to describe the rehabilitation of a 68 year old female with this condition who presented with progressive muscle weakness, dysphasia and breathlessness. MRI Brain showed prominent white matter areas of high signal especially in the posterior horn. Electromyography and nerve conduction studies showed generalised sensori-motor axonal neuropathy. Eight months post admission she was transferred to a rehabilitation unit.

**Method:** This single case study was chosen due to the condition's complexity and challenging rehabilitation. Treatment included range of motion, flexibility and strengthening exercises, trunk control, MOTomed, gait and balance re-education and transfer practice. Outcome measures used were the Oxford Scale for muscle strength, the Elderly Mobility Scale (EMS), transfer and mobility outcomes.

**Results:** On admission the patient demonstrated grade  $1/5$  strength bilaterally and could not stand or mobilise. At 24 months post admission she had grade  $4/5$  strength bilaterally, independent bed mobility, was transferring and mobilising approximately 35 metres with a rollator zimmer frame and standby assistance of one. Her EMS improved from  $6/20$  to  $11/20$ .

**Discussion:** Although there is no cure for mitochondrial cytopathy, multidisciplinary input improves symptoms and quality of life. This case study highlights the vital role of physiotherapy in rehabilitation and may prove useful for other healthcare professionals treating similar cases. The increased EMS score demonstrates a change from dependence in mobility and activities of daily living (ADLs) to borderline safety with mobility and independence in ADLs. She now only requires assistance of one person and is suitable for discharge home with necessary house adaptations.

#### Reference:

1. Muravchick S (2008) Clinical implications of mitochondrial disease. *Adv Drug Deliv Rev* 60:1153–1160.

## P39

### Executive Dysfunction is Independently Associated with Balance Post-stroke

Sara Hayes, Claire Donnellan, Emma Stokes

Trinity College Dublin, Dublin, Ireland

**Introduction:** Executive dysfunction (ED) is common post-stroke. This study investigated the relationship between executive function (EF) and physical function post-stroke.



**Methods:** Ethical approval was given by the relevant hospital committees. Participants were included in this cross sectional study if they were: <6 months post-first stroke, not aphasic, had no pre-stroke vascular dementia and/or other neurological conditions. EF was measured by the Behavioural Assessment of Dysexecutive Syndrome (BADs). The Berg Balance Scale (BBS), Motor Assessment Scale (MAS), Barthel Index (BI), Scandinavian Stroke Scale (SSS), Geriatric Depression Scale (GDS) and Mini Mental State Examination Score (MMSE) were also used. Comparisons were made between participants with ED and without ED using independent t-tests. Hierarchical multiple linear regression analysis determined the independent associations of balance, motor function and activity of daily living (ADL) ability post-stroke.

**Results:** Participants ( $n = 100$ ) were of mean (SD) age 70.61 (12.21) years, 1.1 (1.23) months post-stroke and had education of 11.61 (3.67) years. The sample demonstrated mean BADs, SSS, GDS and MMSE scores of: 11.96 (5.25), 45.96 (8.78), 8.67 (3.82) and 26.23 (5.43), respectively. 47 % of this sample demonstrated ED. Participants with ED performed significantly poorer than participants without ED in the SSS, GDS, MMSE, BBS, MAS and BI ( $p < 0.05$ ). Balance was independently associated with age, education, stroke severity, time since stroke, and EF (Beta =  $-0.24$ ,  $-0.21$ ,  $0.71$ ,  $-0.17$ ,  $0.19$ , respectively,  $p < 0.05$ ). Motor function was independently associated with stroke severity, global cognition and time since stroke (Beta =  $0.88$ ,  $-0.13$ ,  $-0.11$ , respectively,  $p < 0.05$ ). ADL ability was independently associated with education and stroke severity (Beta =  $-0.13$  &  $0.86$ , respectively,  $p < 0.05$ ). The variance in balance, motor function and ADL ability explained by each model was 72, 78 and 79 %, respectively.

**Discussion:** ED is independently associated with balance post-stroke. Clinicians should consider this when retraining balance post-stroke.

## P40

### Long-Term Care in Dublin City and County: Does Service Provision Match Mapped Need?

David Robinson<sup>1</sup>, Michael Arrigan<sup>2</sup>, Maria Gaughan<sup>1</sup>, Jennifer Feighan<sup>1</sup>, Gerard Boyle<sup>1</sup>, Jan Rigby<sup>2</sup>, Rose Anne Kenny<sup>1</sup>

<sup>1</sup>Department of Medical Gerontology, St James's Hospital and Trinity College, Dublin, Ireland, <sup>2</sup>Centre for Health Geoinformatics, National University of Ireland, Maynooth, Ireland

**Introduction:** Eleven per cent of Ireland's population is over 65, of whom five per cent reside in nursing homes—approximately 27,000 people.<sup>1</sup> Public provision of nursing home beds has declined while private provision has trebled in response to tax incentives. Anecdotal evidence suggests that location is a factor in accessing residential care—particularly from acute hospital. To date there has been no assessment of the location of nursing homes to assess if this demographic need is met appropriately. This purpose of this study is to map the location of nursing homes in Dublin city and county and examine for correlations, if any, with the distribution of the older population determined from census data.

**Methods:** Publicly available census data was used to generate a map of the over-65 population throughout Dublin city and county. We obtained the addresses of nursing homes from a public register, and matched them with a directory of geo-coded co-ordinates.<sup>2</sup> Other information gathered included number of beds per institution, and whether the nursing home was public or private.

**Results:** Public nursing homes are clustered towards the city centre and within the boundaries of the city's peripheral motorway. Private nursing homes are more dispersed, with more located beyond the periphery. There is also a cluster of private nursing homes in the south-east of the city, suggesting private nursing home location may be affected by other factors such as access to affordable land, or access to wealthier demographics. Two areas, the north-east and south-west, have a lack of nursing home beds relative to high numbers of older people.

**Discussion:** Accessing residential care can be a complex process with many financial and legal barriers to be negotiated. This study suggests that for some areas of the city there are also geographic barriers to accessing care.

## P41

### App Deployment of NIHSS (National Institutes of Health Stroke Scale) is Faster than Paper Format in Clinical Practice

Catherine Peters, Cathy O' Callaghan, Susie O' Callaghan, Shane O' Hanlon, Grainne O' Malley, Margaret O' Connor, Declan Lyons

University Hospital Limerick, Limerick, Ireland

**Introduction:** NIHSS is the standard tool for stroke thrombolysis assessment. Every minute of acute ischaemic stroke results in loss of 1.9 million neurons. Clinical trials consistently show better outcomes with earlier thrombolysis. Deployment of the paper version of the NIHSS in clinical practice can be cumbersome and lengthy. The aim of this study was to compare the deployment of the paper version of NIHSS with the app version (Doctot) on iPhone.

**Methods:** Paper and app versions of NIHSS were performed on 24 patients by 5 Specialist Registrars certified in NIHSS deployment. Inter-rater reliability was assessed prior to commencing the study. Paper and app versions were performed on all patients by 2 separate operators at least 1 h apart. Timing was by a blinded observer.

**Results:** Each operator performed paper and app NIHSS on alternate patients. The average time taken to perform NIHSS was 5 min 45 s for the app and 7 min 6 s for the paper version. This comparison was performed with the paper version printed and ready to be used. The app version of the NIHSS was performed in 10 patients by 2 operators and the results were reproducible. The overall NIHSS score was the same with deployment of app or paper NIHSS in 92 % ( $22/24$ ) of patients. In the remaining 8 %, there was a difference of 1 point and 2 points between scores.

**Discussion:** The earlier thrombolysis is performed, the better the outcome. The app version of the NIHSS is a reliable and faster method of deployment of the NIHSS. Operators would note, however, that there was some difficulty in a small number of patients with viewing the images for item 13 of the score "Best language". This could be overcome by use of an iPad instead of iPhone.

## P42

### Stroke Thrombolysis in a Large Teaching Hospital: A Retrospective Review

Catherine Peters, Margaret O'Connor, Peter Boers, Declan Lyons

*University Hospital Limerick, Limerick, Ireland*

**Introduction:** Stroke occurs every hour in Ireland and accounts for over 5 million deaths worldwide each year. Thrombolysis is only applicable within a small time window. Treatment is nearly twice as effective when administered within the first 90 min as when administered within 90–180 min. Recently, the license for alteplase has been extended to 4.5 h.

**Methods:** This was a retrospective audit of all patients thrombolysed from January 2011 to December 2011 at Mid Western Regional Hospital, Limerick. Hospital In-patient Enquiry (HIPE) data was used to identify patients and the Emergency Department and medical case notes were reviewed.

**Results:** In all, 306 patients with ischaemic stroke were admitted. 11 (3 %) were thrombolysed. The average age was 62 years. 4 presented during the night. Average door to needle time was 1 h 37 min, with a range of 62–160 min. The average time to thrombolysis was 2 h 47 min. 2 patients died in the subsequent weeks, 1 due to aspiration pneumonia and the other due to an underlying malignancy. 1 patient had a symptomatic haemorrhage. 8 were discharged home, 6 were completely independent. 2 were discharged to a nursing home. There was no association between time to thrombolysis and functional outcome.

**Discussion:** Thrombolysis is the standard of care for stroke patients who present within an appropriate time frame and fulfil inclusion criteria. Continued experience will lead to improved outcomes and door to needle times in this setting. Best standards suggest a thrombolysis rate of 5–10 % and door to needle time of 60 min. On-going education of healthcare personnel and the public is required to try and improve outcomes for stroke thrombolysis and numbers eligible to receive this potentially life-saving treatment.

## P43

### Promoting Teamwork in an Acute Rehabilitation Setting Through Multi-Disciplinary Team Rehabilitation Consultations

Elaine O Connor, Catriona Moran, Jaspreet Bhangu, Sinead Coleman, Fiona Connaughton, Conal Cunningham

*St. James's Hospital, Dublin, Ireland*

**Introduction:** The Medicine for the Elderly Service (MedEl) in St. James's Hospital provides a rehabilitation service to male and female inpatients. Historically, when patients were referred for a rehabilitation consultation, the registrar would review the patient on the ward and determine the appropriateness of the patient based on information gathered from the allied health professional's documentation within the medical chart. There was limited liaison between the registrar and the Multi-disciplinary team (MDT) working in the rehabilitation service. St. James's introduced a MDT rehabilitation consultation process in March 2012 in order to increase communication and promote team working amongst staff and ultimately improve patient care.

**Methods:** A weekly meeting is held to discuss patients referred for consultation and to discuss treatment goals prior to transferring from an inpatient ward to a rehabilitation ward. Attendance at this meeting includes a MedEl Registrar, Discharge Sister, Occupational Therapist and Physiotherapist working within the rehabilitation setting.

**Results:** On average there are between 5 and 10 patients referred for consultation on a weekly basis. The patients' current functional,

cognitive and psychosocial needs are discussed and a team decision is then made regarding potential treatment targets and the settings most appropriate to achieve these targets. Improvements in patient treatment and team based purpose have been made in a short space of time.

**Discussion:** Katzenbach and Smith (1993) propose that for teams to function there are four elements "common commitment and purpose, performance goals, complementary, skills and mutual accountability".<sup>1</sup> A successful team working approach has been achieved through the above initiative. Within clinical practice it is anticipated that this will have a positive impact on patient's treatment goals for rehabilitation and have a positive outcome on their quality of life on discharge from hospital.

## Reference:

Katzenbach RJ, Smith DK (1993) The Discipline of Teams. *Harvard Business Rev*, 71(2), 111–120.

## P44

### Age-Related White Matter Disease and an Incomplete Circle of Willis

Daniel Ryan, Susan Byrne, Ruth Dunne, Mark Harmon, Joseph Harbison

*St. James's Hospital, Dublin, Ireland*

**Introduction:** Hypoperfusion episodes may play a role in the development of age-related white matter disease (WMD). If so, an incomplete circle of Willis (CoW) would impair anastomosis, worsen perfusion capacity and thus increase WMD. We investigated a correlation between age-related WMD and an incomplete CoW.

**Methods:** Using 1.5T MRI and intracranial MRA, data was collected on a convenience sample between July 2008 and January 2009. All patients were independently assessed for CoW variants by two researchers and categorised as having a normal CoW (no hypoplastic vessels), a complete CoW (hypoplastic vessels but no absent vessels) or an incomplete CoW (absent vessels). Because we were assessing age-related WMD, only those over 50 years old underwent WMD scoring, which was carried out by two researchers, blinded to MRA findings.

**Results:** The CoW was characterised in 163 patients while 90 (all >50 years) underwent WMD assessment (mean age 65.5 years). The Kappa inter-rater reliability between the CoW assessors and between WMD assessors was 0.57 and 0.63 respectively. The prevalence of CoW variants in our sample strongly correlated with that of the seminal neuropathological paper by Riggs et al. WMD scores were compared according three age and gender matched groups; a complete, an incomplete and a normal CoW. A 37 % increase in white matter lesions was observed in patients that possessed an incomplete CoW (n = 21) compared with those that possessed a complete CoW (n = 69) (WMD score 6.52 vs. 4.11 p = 0.03). Patients with absent anterior vessels exhibited more WMD in the frontal region than those with intact anterior vessels (3.7 vs. 1.72, P < 0.001). Patients with absent posterior vessels exhibited greater WMD in the occipital area than those within intact posterior vessels (2.52 vs. 1.34 p = 0.014).

**Discussion:** This data suggests that congenital absence of anastomotic capacity correlates with incident age-related WMD, suggesting a hypoperfusion mechanism is involved.

## P45

### Mobility Norms for Community Dwelling, Older Irish Adults: Gait Speed and Timed Up-and-Go

Orna Donoghue, George Savva, Hilary Cronin, Rose Anne Kenny

*The Irish Longitudinal Study on Ageing (TILDA), Trinity College Dublin, Dublin, Ireland*

**Introduction:** Timed walk and the timed up-and-go (TUG) test assess functional mobility and are useful in geriatric assessment. However, population based normative data for Irish adults is not currently available. This study calculated age, gender and height specific norms for gait speed and TUG in community dwelling, older Irish adults.

**Methods:** A nationally representative sample of 8,504 community dwelling adults ( $\geq 50$  years) took part in wave 1 of The Irish Longitudinal Study of Ageing (TILDA). Exclusion criteria for this study included neurological disease (Parkinson's disease) and cognitive impairment (Alzheimer's disease, dementia, MMSE  $< 10$ ). Usual gait speed was measured using a 4.88 metre GAITRite walkway with a 2.5 metre acceleration and 2 metre deceleration phase at the start and end respectively. Participants also completed a TUG test (rise from sitting, walk 3 metre at normal pace, turn around and return to seated position). Gait speed and TUG data were available for 4,931 and 5,836 participants respectively. Normative values were estimated by Generalised Additive Models for Location, Scale and Shape (GAM-LSS) using the R statistical software. Models were adjusted for age, gender and height (dichotomised at sex specific medians).

**Results:** Analysis provided normative data (median, 5th, 10th, 25th, 75th, 90th and 95th percentiles) for gait speed and TUG at each age stratified by gender and height. Performance on both tests decreased with age while there were small differences between gender and height categories. Norms were obtained in tabular and graphical format.

**Discussion:** This study provides a nationally representative set of normative data for commonly used mobility tests in older Irish adults. These will allow clinicians to compare patient performance to that of the general, community dwelling population of the same age, gender and height, allowing better diagnosis and management of older adults.

## P46

### Geriatricians in the Acute Medicine Unit in a University Hospital

Onetefse Nttholrang, Therese Carey, Jonathon O'Keeffe, Morgan Crowe, Diarmuid O'Shea, Graham Hughes, Kit Mun Tan

*Department of Medicine for the Elderly, St. Vincent's University Hospital, Dublin, Ireland*

**Introduction:** Acute Medicine Units (AMU) are part of the National Acute Medicine Programme. This paper reviews the profile and outcome of patients admitted to the AMU in the first 2 months of operations in our 480-bed university hospital. Our AMU admits patients who are medically stable, likely completing treatment and investigations within 48 h. Patients who require longer than 48 h will be referred for admission to inpatient teams. A consultant geriatrician is the AMU physician one in 3 weeks. During other weeks, the geriatric medicine (GM) stroke service, nursing home and GM liaison consultation service will see patients in the AMU when required. Multidisciplinary team input is available.

**Methods:** The period analysed was from 05/03/2012 to 09/05/2012.

**Results:** 262 patients were admitted to the AMU with a median age of 67 (range 17–94 years). 23 % of the patients were aged  $\geq 80$ . 78 % of the patients were discharged from the AMU, 22 % required inpatient admission. Patients  $\geq 80$  were more likely to be admitted (35 vs. 18 %,  $p = 0.005$ ) compared to patients  $< 80$ . Patients who were admitted were older, (average age  $67.7 \pm 18.9$  vs.  $61.1 \pm 20.7$ ,  $p = 0.02$ ) and average length of stay (ALOS) was longer ( $11.9 \pm 10.1$  vs.  $2.1 \pm 1.5$  days).

In addition to the AMU physician/consultant geriatrician one in 3 weeks, the stroke service, nursing home and GM liaison consultation service saw 18, 13 and 8 patients respectively.

**Discussion:** The findings show that a significant percentage of patients admitted to the AMU can benefit from specialist GM input. 65 % of patients aged  $\geq 80$ , were discharged directly from the AMU after treatment and investigations with appropriate follow up plans. Early specialist GM input for patients admitted acutely may improve patient outcome and reduce complications, ALOS and overall costs. It is important to have a structured GM service in AMUs of acute hospitals.

## P47

### What Happens to Patients Awaiting Nursing Home Care in an Acute Hospital? Status: Pending

Kit Mun Tan, Graham Hughes, Diarmuid O'Shea

*Department of Medicine for the Elderly, St. Vincent's University Hospital, Dublin, Ireland*

**Introduction:** A number of older adults admitted to hospital from home require nursing home care after a severe acute illness. A proportion of the patients will go through the Nursing Home Support Scheme (NHSS) or Fair Deal process. This paper describes outcomes of patients awaiting long term care (LTC) in our 480-bed university hospital.

**Methods:** All general geriatric medicine consultations in 2011 were reviewed retrospectively.

**Results:** There were 330 such consultation requests in total, requesting geriatric medicine review, rehabilitation or assessment for LTC. 128 patients' NHSS applications were supported after review. 13 % of patients died in hospital awaiting LTC. 20 % were discharged home with supports and home care packages. 83 patients were discharged to LTC with average length of stay (ALOS) of 117 days. 13 patients (16 %) died within 3 months to a year after discharge to LTC.

LTC was the reason for consultation for  $8/11$  patients with locally advanced or metastatic cancer. Of these 3 died, 3 were discharged to LTC, 3 to hospice, 1 to another hospital and 1 to home with palliative care. Opportunistic data on 47 patients discharged to LTC from 2008 to 2010 showed ALOS of 63 days. ALOS of 26 patients discharged to LTC from January to June 2011 was 83 days and 134 days for 57 patients discharged from July 2011 to April 2012.

**Discussion:** The results highlight the frailty of patients awaiting LTC. The high ALOS may reflect severity of acute illness and various external factors including availability of funding affecting discharge date. Although the data is opportunistic, it is concerning that ALOS of patients discharged to LTC had increased over 4 years despite introduction of and increased familiarity with the NHSS. Appropriate resources and planning are required to facilitate timely discharge from the acute hospital for this group of patients.

## P48

## Outcome of Patients Seen on General Geriatric Medicine Consultation in a University Hospital

Kit Mun Tan, Graham Hughes, Diarmuid O'Shea

Department of Medicine for the Elderly, St. Vincent's University Hospital, Dublin, Ireland

**Introduction:** The number of older adults in hospitals is rising. Outcome of older adults in hospital varies depending on degree of frailty, severity of acute illness and social support available to patients.

**Methods:** We reviewed 330 consecutive general consultations to our service in our 480 bed university hospital. Stroke, ortho-geriatrics and inpatient nursing home liaison service consultations were excluded.

**Results:** 330 patients (54 % female; average age 82) were seen. MMSE was available on 175 patients of whom 82 % scored  $\leq 23$ . Assessments for long term care (LTC) and rehabilitation were 37 and 18 % respectively. 14 % of the patients died before discharge, 25 % were discharged to LTC and 14 % to rehabilitation or convalescence. 280 patients discharged alive had average length of stay (ALOS) of 65 days. ALOS of patients discharged alive not to a nursing home was 44 days. ALOS of patients admitted from home and discharged to a nursing home was 117 days.

One and 3 month readmission rates for all patients were 9 and 16 % respectively and for patients discharged to rehabilitation/convalescence was 15 and 22 % respectively. 24 % of patients died within 3 months to 1 year of discharge.

**Discussion:** The findings show the frailty and complexity of older adults in hospital. ALOS is also likely affected by external factors such as availability of funding for home care packages, community supports and nursing home support scheme. Older adults can benefit from direct geriatric medicine specialist care with reduced complications, better functional outcome and reduced likelihood of discharge to a nursing home in comparison to a consultation service only.

The number of older adults admitted to hospital will continue to rise. Forward planning is required for appropriate resource allocation including increased specialist geriatric medicine teams and wards, and community supports to enable discharge home instead of to a nursing home.

## P49

## The Prevalence of Chronic Kidney Disease in a Cohort of Patients Over 65 Years with Normal Serum Creatinine

Ishwarya Balasubramanian, Catherine Peters, Margaret O'Connor, Declan Lyons

Mid Western Regional Hospital, Limerick, Ireland

**Introduction:** The prevalence of chronic kidney disease (CKD) increases with age. Older patients have lower lean muscle mass and therefore using serum creatinine alone as marker of renal function can lead to under diagnosis of CKD. The aim of this study was to review the prevalence of CKD amongst a cohort of elderly patients with normal serum creatinine.

**Methods:** Doctot application on the smartphone was used to calculate eGFR in a cohort of patients >65 years admitted to the Department of Geriatric Medicine with a normal serum creatinine on admission. 40 patients were included. This application is based on the MDRD formula (includes age, sex, ethnicity and serum creatinine). Patients were then classed into the various stages of CKD.

**Results:** Of the 40 patients reviewed, 35 had renal disease. Interestingly, only 5 had a diagnosis of renal impairment recorded in the medical notes. 20 of the 35 patients had stage 1 CKD and 15 had stage 2 CKD. 20 of the 35 patients with renal impairment were females over 75 years. This group also had a number of co-morbidities including diabetes and hypertension.

**Discussion:** eGFR is better than serum creatinine alone for assessment of renal function in the elderly. It is important not only for diagnosis but also for appropriate medical investigation and drug prescribing. As the MDRD formula excludes BMI, further study is warranted to compare measurement of eGFR using MDRD formula with The Cockcroft and Gault equation in this older population.

## P50

## Medical Insurance Status and Thrombolysis for Stroke

Jaspreet Banghu, Mawish Naureen, Joseph Harbison, Karl Boyle

Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland

**Introduction:** A recent analysis of the Irish Longitudinal Study of Ageing (TILDA) showed that subjects with health insurance were significantly more likely to be aware of their atrial fibrillation, perhaps indicating a greater awareness of health and health status. Thrombolysis is an effective treatment for ischaemic stroke but is dependent on patient recognition of symptoms and rapid presentation to be deliverable. In Ireland, thrombolysis for stroke is not recognised as a remunerable procedure by any insurance company and there are no financial incentives for doctors to perform the procedure. We performed a study to determine if patients presenting for thrombolysis were more likely to be insured.

**Methods:** Consecutive patients who had undergone thrombolysis in St James's hospital between October 2011 and May 2012 were identified using the Hospital In-patient Enquiry (HIPE) Portal Stroke Register and age and gender matched controls were identified from the same source in a 1:2 ratio. Insurance status on admission was determined from hospital records.

**Results:** 20 subjects underwent thrombolysis in the time period (10 Male, 10 Female: Median age 80 years, range 56–94 years). Controls were well matched (median age 80 years, range 55–96 years). 11 (55 %) of the thrombolysed group had health insurance at present compared with 10 (25 %) of the control group ( $p = 0.02$  Chi Square, OR 3.7 (95 % CI 1.2–11.4)). Amongst the 60 subjects there was no significant difference in age between insured and non-insured (80.0 vs. 77.8 years). There tended to be a higher proportion of men with insurance 14 of 21 insured were male (67 %) versus 17 of 39 non insured (44 %) ( $p = 0.08$  Chi Square). 30-day mortality in the thrombolysed group was 5 % and in the control group 10 %.

**Discussion:** A higher proportion of patients receiving thrombolysis for stroke had insurance than controls. This may indicate a higher awareness of stroke symptoms in this group.



## P51

### The Obese and the Underweight Community-Dwelling Older Person in a Rehabilitation Setting: A Comparative Case Study

Sheela Perumal, Denis Donohoe, George Robles, Catriona de Robeck, Cecelia O'Malley, Michael Maher, Emer Sheridan, Geraldine Connolly, Mary Weakliam, Emily Adamson, Carla Weir, Eilis Hennessy, Avril Halligan, Aine Flynn, Eimear O'Dwyer

*Our Lady's Hospice & Care Services, Dublin, Ireland*

**Introduction:** The Community Reablement Unit (CRU) is an intermediate care unit for the older persons, offering a short-term inpatient multidisciplinary reablement programme to maximise safety, functional independence and mobility, thus making it possible for our clients to continue living at home for longer.

**Methods:** A detailed retrospective medical and multidisciplinary chart review of obese and underweight clients admitted to CRU in the last 4 months.

**Results:** 31 clients selected: 19 obese (average age 79.5 years, 53 % females) and 12 underweight (average age 81.9 years, 84 % female). Average BMI in the obese and underweight clients were 35 and 17 kg/m<sup>2</sup> respectively. The obese population were prone to type II Diabetes (31 vs. 8 %) and osteoarthritis (70 vs. 50 %). Depression was seen more frequently in the underweight (42 vs. 26 %) as was osteoporosis (75 vs. 37 %). 41 % of the obese clients required external supports in the home (meals-on-wheels, home-help or home-care-assistant), compared with 60 % of the underweight clients. 63 % of the obese clients walked independently or with a stick compared with 32 % of the underweight. The use of 3/4-wheeled rotators was most prevalent in the underweight (66.7 vs. 37 %).

The cognitive function in both populations was comparable (underweight MOCA 22.4/MMSE 26.2, obese MOCA 22.2/MMSE 28.6). In the gym, an improved Timed-Up-and-Go and BERG Balance Scale of −8.0 s (vs. −4.3 s) and +8.8 (vs. +6.4) respectively was seen in the underweight client.

**Discussion:** The underweight were 4.1 years older than the obese. The former were found to have fewer co-morbidities. Despite a higher need for walking aids, the underweight progressed better with their programme and made more gains. Our plan is to invite both of these groups back to CRU after a 6 month interval for another spell of rehabilitation to track and compare their progress.

## P52

### Post-Processing Techniques for MR Perfusion and MR Angiography that Confirm the Presence of Borderzone Infarction

Daniel Ryan<sup>1</sup>, Soren Christensen<sup>2</sup>, James Meaney<sup>1</sup>, Andrew Fagan<sup>1</sup>, Roseanne Kenny<sup>1</sup>, Joseph Harbison<sup>1</sup>

<sup>1</sup>St. James's Hospital, Dublin, Ireland, <sup>2</sup>Brain Imaging Laboratory, Melbourne, Australia

**Introduction:** Borderzone Infarction (BZI) accounts for 12 % of all infarcts and may be more prevalent in older people. Historically, investigation into the aetiology of borderzone infarction has been restricted by an inability to conclusively identify the borderzone regions of the brain, secondary to territory variability. We have

devised a robust technique to estimate the borderzone regions using existing, well-established MR techniques.

**Methods:** As part of a larger study that is currently investigating hypotension-induced stroke and borderzone infarction, all patients underwent an acute stroke protocol with the Phillips 3T MRI. All underwent MR perfusion gradient echo imaging with 0.1 mmol/kg Gadovist contrast, seventeen 5 mm slices, with no gap, at a shortened repetition time of 0.904 s. Time of Flight MRA was conducted, as per standard protocol, however 11 min acquisition time was used to increase resolution. Using perfusion data, individualised perfusion territory maps were generated with matlab post-processing software through an iteration-derived process. Using MRA data, the anterior, middle and posterior cerebral vessels were individually seeded using ITK snap post-processing software.

**Results:** We present 6 patients in which the borderzone location of the infarct was confirmed by the use of perfusion territory maps and vessel territory maps. When these post-processed images were compared with standard DWI and flair images, a considerably benefit was observed in the examiners capacity to conclusively identify a borderzone infarct in each patient. Concordance between methods was excellent.

**Discussion:** Conclusive identification of the borderzone regions facilitates research that will determine the underlying mechanisms of these infarct types.

## P53

### Nursing-Led Swallow Screening in Acute Stroke Unit

Maeve Brennan, Riona Mulcahy, Una O'Brien, Susan Cliffe, Maeve

*Waterford Regional Hospital, Waterford, Ireland*

**Introduction:** Dysphagia, an impairment in the ability to swallow, occurs in up to 50 % of patients presenting with stroke/TIA. National clinical guidelines, issued by the Irish Heart Foundation (IHF) March 2010, recommend a policy of nil per oral (NPO) for all new patients with Stroke until a formal swallow screening is completed. The aim of this study was to establish a formal nursing-led swallow screening protocol in the acute stroke unit (ASU) to facilitate early, accurate identification of patients with normal swallowing function and reduce unnecessary oral restrictions.

**Methods:** Published swallow screening protocols were reviewed and compared against IHF criteria. A swallow screening protocol, produced by the Scottish Intercollegiate Guidelines Network, was identified as meeting all criteria set down by the IHF and was subsequently modified to fit the local context. A review of the completed policy, procedure and training package was carried out within speech & language therapy (SLT) and nursing practise development departments, and externally by a dysphagia Clinical Specialist.

**Results:** Implementation of the protocol began in February 2012 with three nursing staff having completed training to date. Corroboration between the nursing-led swallow screening and a SLT swallow assessment was found to be 84.6 % (n = 13 patients). A discrepancy occurred in 2/13 screenings which was attributed to false positives—observing signs of aspiration where the patient, on further assessment by SLT, was deemed non-dysphagic. There was no occurrence of false negatives; where patients with dysphagia passed the screening.

**Discussion:** Preliminary data indicates a high inter-rater agreement between swallow screening and dysphagia clinical assessment. A further formal audit is required in order to appraise the sensitivity and suitability of the screening tool. It is anticipated that more nursing staff will be trained, in an effort to meet the IHF guideline of swallow screening completed within 3 h of admission.



## P54

**An Interdisciplinary Cross Site Stroke Service in County Louth: An Overview of the First Year**

Shay Englishby, Iara Faria, Olwyn Lynch, Patrick Mc Eneaney, Karen O'Sullivan, Aileen Rafferty, Nuala Rafferty, Emma Scully, Mansour Smew, Emma Walker

*Stroke Cross site interdisciplinary team, Our Lady of Lourdes Hospital and Stroke Rehab Unit, Louth County Hospital, HSE: DNE, County Louth, Ireland*

**Introduction:** An overview of the dedicated stroke service provided by an interdisciplinary cross-site team in County Louth. The poster will present statistics from patients who availed from the service in 2011.

**Methods:** Data was collected on all patients who were admitted to the Acute Stroke service in Our Lady of Lourdes Hospital and Stroke Rehabilitation Unit in Louth County Hospital from January to December 2011; including gender, average age, average length of stay, average on Functional Assessment measure scores and discharge destination.

**Results:** The cross-site stroke service in County Louth treated 223 patients in 2011. The number of patients who have returned home represents a large percentage.

**Discussion:** The Stroke service in County Louth is still developing and is striving to achieve best practice as outlined in the National Stroke Programme Guidelines.

**References:**

National Clinical Guidelines and Recommendations for the Care of People with Stroke and Transient Ischaemic Attack, Irish Heart Foundation Council for Stroke (2009).

## P55

**Transforming Our Practice: Neuro-Developmental Treatment Approach Following Stroke**

Sinead Duddy<sup>1</sup>, Sarah Ronayne<sup>1</sup>, Sheila Sheridan<sup>2</sup>, Olivia Tierney<sup>2</sup>

<sup>1</sup>Mayo General Hospital, Castlebar, Mayo, Ireland, <sup>2</sup>Sacred Heart Hospital, Castlebar, Mayo, Ireland

**Introduction:** A 'Neuro Developmental Treatment (NDT)/Bobath Certificate Course in the Management and Treatment of Adults with Hemiplegia' was attended by four therapists working in gerontology and neurology. Their clinical practice was transformed following this 3 week course. Workshops were completed with colleagues from acute, rehabilitation and community based settings. The workshops aimed to add to participants' knowledge of stroke rehabilitation using an NDT approach and to work towards continuity and consistency in rehabilitation programmes for patients after stroke across all service areas.

**Methods:** Four workshops were completed over 4 months. 20 places were offered on a first come, first served basis. Workshops used a theoretical and practical approach including patient demonstrations. Participants completed evaluation forms after the final workshop. Thematic analysis was used to obtain results which were collated using Microsoft Excel.

**Results:** Preliminary results illustrate that the main outcomes of the workshops were: increased clinical knowledge of the NDT approach, increased awareness of therapeutic use of self and the use of function in stroke rehabilitation. The results also suggest benefits to clinical practice.

Participant 5 reported a 'Greater understanding.....of functional NDT approach'

Participant 6 states the workshops 'made me re-think my approach with clients'

Participant 19 states 'client practical brought all the theory more to life.....could see its possible application in community setting'.

**Discussion:** These workshops created a starting point for improved continuity in stroke rehabilitation programs for patients moving through acute, rehabilitation and community settings. All participants reported increased knowledge of NDT and identified specific clinical gains suggesting an openness to incorporate this approach in stroke rehabilitation. Its application is already apparent across service areas. Ultimately, the authors are seeking to transform the delivery of patients' stroke rehabilitation programs across all service areas. Limitations include author bias, author skill set in NDT and resources.

## P56

**High Sensitivity Troponin T Results in a Group of Older Patients**

Catherine Oliver, Eoin Hunt, Declan Lyons, Margaret O'Connor

*Limerick University Hospital, Limerick, Ireland*

**Introduction:** In 2011 most hospitals in Ireland changed the analysis of troponin T from the 4th generation troponin T measurement to the 5th generation high sensitivity (hs) troponin T measurement. The normal range was determined from healthy volunteers aged up to 71 years old. We wanted to assess hs troponin T levels amongst a cohort of older patients and whether they correlated to the estimated glomerular filtration rate (eGFR).

**Methods:** We identified every patient  $\geq 75$  years who was admitted under the geriatric service in January 2012. We then identified those from the group that had at least one troponin T measured on admission. We also obtained the creatinine level of each patient and their presenting complaint.

**Results:** 72 patients  $\geq 75$  years had a troponin T checked on admission. Of those, 49 (68 %) had a positive result ( $>14$  ng/L). 45 patients had a repeat troponin T checked after 6 h, only 2 of those had doubled from the previous value, indicating acute myocardial infarction. There was a trend towards higher troponin T levels in patients with a lower eGFR level.

**Discussion:** As has been shown previously, people with a reduced eGFR are more likely to have a raised troponin T. In the older population, an elevated troponin T result is of limited value for the diagnosis of myocardial infarction.

## P57

**Assessment of Visual Acuity in Older Adults on an Orthopaedic Unit**

Sheila Roche<sup>1</sup>, Kieran O'Connor<sup>2</sup>, Mary Warren<sup>3</sup>, Laura Vogtle<sup>3</sup>

<sup>1</sup>South Infirmar-y-Victoria University Hospital, Cork, Ireland, <sup>2</sup>Mercy University Hospital, Cork, Ireland, <sup>3</sup>University of Alabama at Birmingham, Birmingham, AL, USA

**Introduction:** Compromised vision impacts participation in daily activities and is a risk factor for falls and hip fractures in older people. The aim of this study was to examine the visual status of a cohort of older adults admitted to an orthopaedic unit.

**Methods:** A convenience sample of 50 persons, mean age 79.2 years (SD 6.4), was included in the study. Participants were screened for cognition using the Short Portable Mental Status Questionnaire and excluded if scores were >4 errors. A visual history was obtained and participants' glasses were inspected. Distance acuity, reading acuity and contrast sensitivity were assessed using the Intermediate Acuity Test Chart/Low Vision LeaNumbers Chart, the Warren Text Card and the LeaNumbers Low Contrast Screener.

**Results:** Nine males and 41 females made up the sample. 88 % had falls within the last year, with 34 % having multiple falls. 26 % did not have their glasses in hospital until prompted; 83.7 % had glasses which were in poor condition and 68 % had no diagnosed eye disease. A significant but moderate correlation (0.37) was found between eye disease and age, and intermediate acuity and age. 32 % had not had an eye examination within the last 2 years. When tested wearing their habitual correction, if available, 6 % had low vision (binocular visual acuity  $<^6/_{18}$ – $^3/_{60}$ ) and 2 % were blind (binocular visual acuity of  $<^3/_{60}$ ); 40.8 % had reading acuities of worse than  $^6/_{7.5}$ , and 28 % experienced deficits in contrast sensitivity function.

**Discussion:** The prevalence of visual impairment increases with age and it has been found to affect mobility, activities of daily living and emotional well-being, yet visual acuity is not routinely screened in hospitals. Clinicians need to routinely enquire about patients' visual status, inspect the condition of their spectacles and encourage regular eye examinations.

## P58

### Strontium Ranelate in Male Osteoporosis

Rosaleen Lannon, Lorraine O'Keeffe, Neasa Fallon, MC Casey, JB Walsh

*Bone Health Service, Mercers Institute for Research on Ageing, St James's Hospital, Dublin, Ireland*

**Introduction:** Osteoporosis affects 1 in 12 men over 50 with lifetime risk of fracture estimated at 20–30 %. Up to 20 % of symptomatic vertebral fractures, 25 % forearm fractures and 30 % hip fractures occur in men. These fractures have a profound impact on morbidity and mortality. Gender differences in risk factors, pathophysiology, and bone structure mean it cannot be directly inferred that treatments preventing BMD loss and fractures in females have the same effect in males. Few trials on the treatment efficacy of osteoporosis drugs have been performed in men. Therefore some treatments are only licensed for use in post-menopausal women or men on corticosteroid therapy. Current licensed treatments options include certain bisphosphonates, teriparatide, calcitonin. Other bisphosphonates as well as strontium ranelate and preotact, another recombinant parathyroid hormone treatment, are often prescribed. Strontium ranelate increases deposition of new bone osteoblasts and reduces resorption of bone by osteoclasts and is promoted as a "dual action bone agent" (DABA).

**Methods:** We performed a review of use in male patients, looking at profile and at evidence of response where available. We looked at data from an existing database. Details on patient demographics, bone density and bone biochemistry are recorded.

**Results:** We identified 35 patients on strontium on referral or following referral to bone service. Mean age  $55 \pm 12.6$  years. 3 of these already had hip fractures. 5 had vertebral fractures. 3 had colles fractures. 7 of these were changed to rPTH within 6 months of referral. Of the remainder, 11 had follow up bone density data available. All but 1 patient showed significant improvement in T-scores especially at spine. Mean t score at spine improved from  $-2.5 \pm 0.78$  to  $-1.7 \pm 0.76$ . Neck of femur improved from  $-2.31 \pm 1.08$  to  $-1.9 \pm 0.86$ .

**Discussion:** Strontium ranelate is a useful and effective treatment in select male patients with established osteoporosis.

## P59

### Neoliberalism, Misrecognition, Maldistribution and Health Inequalities in Ireland: Rendering the Older Person Invisible

Angela Flynn

*University College Cork, Cork, Ireland*

**Introduction:** The neoliberal approach to social and health related policies in Ireland could be said to exacerbate health inequalities. This approach to welfare and provision of care champions the role of the individual, permitting the state to relinquish its distributive responsibilities, all the while couching the ideology within the nomenclature of consumer choice and individualism. A resultant schism has formed between sections of society, amplifying the pre-existing inequalities and reducing levels of social cohesion and social capital. The older person in Ireland finds themselves at risk of becoming invisible within the modern social order. The subsequent misrecognition of the needs of these individuals results in injustice, humiliation, neglect and disrespect.

**Methods:** Through an examination of a range of social and theoretical literature, this paper explores the concepts of redistribution and recognition as approaches to health inequalities and social injustice, and will examine how the politics of difference and the politics of equality play out in the context of Irish healthcare. This discussion will be framed within the frameworks of health inequalities research and social justice.

**Results:** The sustained denigration of the value of reciprocity between the citizen and the welfare state under fire, expedites the social exclusion of the older citizens and strips away layers of social cohesion. The status of the older adult in Ireland is altered as they become a socially constructed collective, with a diminishing entitlement to distributive justice, under a cloak of invisibility that renders recognition impossible.

**Discussion:** The identity of the older adult is at risk. Social justice may well provide an ideological framework on which to restructure redistributive policy so as to counter the hegemony of neoliberalism. It is vital that the concepts of full recognition and distributive justice are examined and applied to health and related policy.

## P60

### Recombinant Tissue Plasminogen Activator for Acute Ischaemic Stroke in a Regional General Hospital 2008–2011

Breffi Drumm, Wael Hussein, Sean Murphy, Clare Fallon

Mullingar Regional Hospital, Westmeath, Ireland

**Introduction:** Rapid access to stroke thrombolysis has become the standard of care for patients with stroke. The aim of this audit was to determine the outcomes on discharge and at 3 months for 60 ischaemic stroke patients treated with recombinant tissue plasminogen activator (rt-PA, alteplase) in a secondary referral centre.

**Methods:** The medical, ambulance and rehabilitation records of 60 patients were reviewed.

**Results:** The mean age of the patients was  $68.03 \pm 13.69$  years (range 28.1–89.3),  $^{13}/_{60}$  (21.7 %) were over 80, and  $^{35}/_{60}$  (58 %) were male. Prior to admission  $^{51}/_{60}$  (84.7 %) were independent (mRS 0–2). Medical history included atrial fibrillation ( $n = 13$ , 21.7 %), transient ischaemic attack ( $n = 5$ , 8.3 %), previous stroke ( $n = 9$ , 15 %), diabetes ( $n = 14$ , 23.3 %), hypertension ( $n = 3,863.3$  %), dyslipidaemia ( $n = 27$ , 45 %). On admission mean NIHSS was 11.5 SD 6.12 (range 2.0–29.0) with no gender difference. Mean time from symptom onset to thrombolysis was 3.22 h SD 0.9 (range 1.75–5.2) and door to needle 1.2 h SD 0.56 (range 0.15–3.83) with  $^{4}/_{59}$  (6.78 %) outside the recommended  $4\frac{1}{2}$  h from symptom onset.  $^{9}/_{60}$  (15 %) required antihypertensive treatment prior to thrombolysis. All patients received a standard dose of alteplase (0.9 mg/kg).

$^{9}/_{60}$  (15 %) patients died within 3 months of thrombolysis (5 M; 4F); symptomatic intra-cerebral haemorrhage ( $n = 1$ ); stroke related complications ( $n = 4$ ); other causes ( $n = 4$ ). Mean length of inpatient stay was 31.98 SD 108.1 days.

Discharge plans were available on  $^{50}/_{60}$  patients,  $^{18}/_{50}$  (36 %, 12 M) were independent (mRS 0–2) on discharge, while  $^{27}/_{60}$  (45 %) were independent at 3 months. 21/50 required on-going inpatient rehabilitation and  $^{4}/_{50}$  required nursing home care.

**Discussion:** This audit suggests that the outcome for patients treated with rt-PA for acute ischaemic stroke in a secondary referral centre are similar to that reported in the literature. Mortality at 3 months was 15 %. 45 % were independent at 3 months (mRS 0–2). There was only 1 intra-cerebral haemorrhage as defined by SITS MOST.

## P61

### Hip Fracture and Bone Health 2010: An Audit of Assessment, Treatment and Follow-Up in a South Dublin Inner City Teaching Hospital

Elizabeth Dunbar<sup>1</sup>, Rosaleen Lannon<sup>2</sup>, Joseph Browne<sup>2</sup>, Niamh Maher<sup>2</sup>, Eilish Thornton<sup>2</sup>, MC Casey<sup>2</sup>, JB Walsh<sup>2</sup>

<sup>1</sup>Graduate Entry Medical School, University of Limerick, Limerick, Ireland, <sup>2</sup>Bone Health Service, Mercers Institute for Research in Ageing, St James's Hospital, Dublin, Ireland

**Introduction:** Hip fracture remains one of the leading causes of morbidity and mortality in the older population. Our institution has had a fracture liaison service in place since 2004, with identified hip fractures offered follow-up and treatment in a specialist bone clinic. This service is audited on a yearly basis to review current management and ensure standards are maintained. A database of hip fractures is maintained by Clinical Nurse Specialists and audited by the medical team yearly.

**Methods:** Data was collected through review of medical charts and a database then compared to previous audit and the standard of the UK National Hip Fracture Database (NHFD-UK).

**Results:** 140 patients with hip fracture were identified. Mean age 79.4 years; 70 % were female. Mean length of stay was 32 days with a 30 day mortality of 6.4 %. We noted 23 % on calcium/vitamin D

supplements and 24 % on further bone protection preadmission. In addition 50 patients (36 %) had previous fractures of which 10 % were hip; 29 patients (18.5 %) had a recorded diagnosis of osteoporosis. Review of discharge medications showed 112 (80 %) on calcium/vitamin D supplement and 95 (68 %) on an antiresorptive. 77 (55 %) of patients attended a follow-up Bone Health Clinic appointment with notable results including a mean serum vitamin D of 54 nmol/L and 72 % having sub-optimal levels despite 6 months of supplementation. Mean T-score at the total hip was  $-2.56$ . Vertebral fractures were noted in 19 (25 %) on lateral vertebral assessment at DXA scanning.

**Discussion:** Compared to averages as represented by the NHFD-UK our service compares favourably, and specifically in relation to bone health, above the UK average. There are areas where improvement is possible. A prospective multidisciplinary database of hip fracture care in Ireland would facilitate more comprehensive audit and optimise hip fracture care and patient outcomes.

## P62

### Audit of the Use of Low Molecular Weight Heparin Amongst Newly Admitted Inpatients At a Tertiary Referral Centre

Conall Fitzgerald, Magdi Mohamed, Victoria Robinson, Jawaid Azam, James Mahon, David Robinson, Miriam Casey, Rose Anne Kenny, Davis Coakley, J Bernard Walsh, Conal Cunningham

St James's Hospital, Dublin, Ireland

**Introduction:** The use of venous thromboembolic (VTE) prophylaxis, including low molecular weight heparin (LMWH), is widespread. However, guidelines in relation to the use of LMWH in the geriatric population are less clear. In our project we aimed to audit the use of LMWH amongst newly admitted inpatients in acute geriatric wards at a tertiary referral centre.

**Methods:** Medical records of patients admitted to acute geriatric wards during a designated 7 week period were examined. Data was recorded using a standardised pro forma developed using hospital guidelines on VTE prophylaxis and guidelines from the National Institute for Clinical Excellence. The principle endpoints examined were: (1) total number of patients treated with LMWH; (2) appropriateness of treatment with LMWH; (3) appropriateness of dosages of LMWH. Data was compared with earlier audit data from this centre and a policy document for VTE prophylaxis amongst geriatric admissions was created.

**Results:** A total of 24 patients over age 65 years were admitted to acute geriatric wards during the designated study period (67 % female [ $n = 16$ ], 33 % male [ $n = 8$ ]).

LMWH was prescribed in 46 % [ $n = 11$ ] of cases. A 40 mg dose of LMWH was charted in 55 % [ $n = 6$ ] of cases. A 20 mg renal dose of LMWH was prescribed in 36 % [ $n = 4$ ] of cases. 9 % [ $n = 1$ ] was prescribed a 1.5 mg/kg dose of LMWH.

Appropriate VTE prophylaxis was prescribed in 83 % [ $n = 20$ ] of cases. Inappropriate use of VTE prophylaxis was recorded in 17 % [ $n = 4$ ] of cases. Errors related to prescription without indication [ $n = 1$ ] and use of renal dosages of LMWH where eGFR was greater than 30 ml/min [ $n = 3$ ].

**Discussion:** Compliance with guidelines on VTE prophylaxis is incomplete. Thorough review of local and international guidelines and audit of LMWH use should be encouraged to promote safe use of VTE prophylaxis.

## P63

**Cognitive Outcomes of Metabolically Healthy Obese (MHO) Older Persons**

Cormac Kennedy<sup>1</sup>, Roman Romero-Ortuno<sup>2</sup>, David Robinson<sup>2</sup>,  
Diarmuid O'Shea<sup>1</sup>, Donal O'Shea<sup>1</sup>, Rose Anne Kenny<sup>2</sup>,  
Jean O'Connell<sup>1</sup>

<sup>1</sup>St Vincent's University Hospital and University College Dublin,  
Dublin, Ireland, <sup>2</sup>St James's Hospital and Trinity College Dublin,  
Dublin, Ireland

**Introduction:** The metabolic syndrome and its individual components are known to have a negative impact on cognitive function in older persons, but studies exploring relationships between obesity and cognitive impairment in the elderly are conflicting. The term metabolically healthy obese (MHO) has been used to describe obese individuals who do not display the expected features of metabolic dysfunction usually associated with excess adiposity. The reported prevalence of MHO varies from 6 to 40 % depending on the population studied and the criteria used to define the condition. We proposed that older MHO individuals have a reduced prevalence of cognitive impairment when compared with metabolically unhealthy obese (MUO) individuals and have analysed The Irish Longitudinal study on Ageing (TILDA) dataset to investigate this hypothesis.

**Methods:** Sampling and data collection for TILDA has previously been described. MHO individuals were defined using cut-points adapted from the International Diabetes Federation consensus definition of the metabolic syndrome, 2006. Regression analysis was performed to compare outcomes of cognitive function. Age, gender, educational level, smoking status and alcohol intake were identified as confounders for inclusion in the regression model.

**Results:** of 8,175 individuals representative of the community-living Irish population  $\geq 50$  years, 6,126 had anthropomorphic measurements taken to calculate BMI. Of these, 2,008 (32.8 %) were obese. The prevalence of MHO was 6.3 % ( $n = 127$ ). The MHO are a younger group (MHO: 16 %  $> 65$  years vs. MUO: 43 %  $> 65$  years) and adjustment for age results in some differences in cognitive parameters losing significance. There was a trend towards better cognitive values for MMSE, MoCA, and reaction times in the MHO group, with immediate and delayed recall scores significantly higher than the MUO ( $p < 0.05$ ).

**Discussion:** Immediate and delayed recall scores are significantly higher in MHO compared to MUO older persons. Analysis of data from future TILDA phases will provide further clarity on cognitive trajectories in ageing MHO individuals.

## P64

**The Role of Geriatric Medicine in the Emergency Department**

Avril Beirne, Therese Carey, Jonathon O'Keefe, Morgan Crowe,  
Diarmuid O'Shea, Kit Mun Tan, Graham Hughes

St Vincent's University Hospital, Dublin, Ireland

**Introduction:** Older people are high users of acute health service resources including emergency departments (ED). For older patients an ED visit can signal high risk of functional decline, frequent repeat attendances and hospital admissions. The evidence base for models of acute care delivery to older people is increasing. We sought to

describe the utility of the Identifying Seniors at Risk (ISAR) tool in predicting ED re-attendance and the impact of Comprehensive Geriatric Assessment (CGA) in the ED.

**Methods:** As part of standard care ED staff of a Dublin tertiary referral teaching hospital screened older ED attendees  $\geq 72$ -years with the ISAR. A convenience sample of positive screened patients (ISAR  $\geq 2$ ) received CGA in the ED and appropriate follow-up. Data for the 12 months of 2011 were captured prospectively.

**Results:** 7,596 patients  $\geq 72$  years accounted for 20 % of ED attendances in 2011, compared with 16 % in 2003. ISAR was performed in 14.9 % (1,136). ISAR sensitivity for ED re-attendance at 1, 3 and 6 months was 77, 80 & 79 % respectively.

In the 'at risk' group, 300 patients received CGA in the ED. ED re-attendance compared favourably with the group that did not receive CGA (21 vs. 24 % at 3 months and 27 vs. 33 % at 6 months).

**Discussion:** An acute care model which identifies 'at risk' older patients using the ISAR and incorporates CGA in the ED setting, with appropriate community follow-up appears to favour a reduction in future acute health service use.

## P65

**Denosumab: Identification and Tolerability in an Irish Bone Health Clinic Population**

Rosaleen Lannon, Victoria Robinson, Conal Fitzgerald,  
Kara Fitzgerald, MC Casey, JB Walsh

Bone Health Service, Mercers Institute for Research on Ageing,  
St James's Hospital, Dublin, Ireland

**Introduction:** Denosumab is available to treat severe osteoporosis in Ireland for 21 months. We reviewed the selection criteria applied to prescribe denosumab, reported side effects and initial biochemical response.

**Methods:** We reviewed the first 140 patients who received denosumab in our bone health clinic, looking at data from an existing database where patients demographics, bone density and biochemistry results are recorded.

**Results:** We identified 128 females and 12 males. The majority had established severe osteoporosis with 32 % having vertebral fractures. Several had suboptimal vitamin D levels with PTH levels at the upper end of normal. Bone turnover was within the normal reference range. The majority of patients had normal renal function or mild dysfunction. It must be noted  $^{62}/_{140}$  patients had stage 3 chronic kidney disease (CKD) or worse. In those commencing denosumab,  $^{71}/_{140}$  had been recently treated with at least a 1-year course of bisphosphonates. Other treatments were evista ( $n = 6$ ), strontium ranelate ( $n = 18$ ) or rPTH 1–34 ( $n = 25$ ). Due to the presence of CKD, 20 patients received denosumab as first line treatment. Indications leading to commencement of denosumab were: lack of response to previous treatments; intolerance (GI in 20 %) of other treatments; non-compliance.

Follow up biochemical markers were carried out on 60 patients 2 weeks after administration of denosumab. There was a notable reduction in CTX ( $p = 0.1$ ) with trends towards a fall in serum calcium and rise in serum PTH. There were no clinically significant episodes of hypocalcaemia.

Clinically reported side-effects were minimal: arthralgia ( $n = 1$ ), mild flu-like illness ( $n = 2$ ) and rash ( $n = 1$ ).

**Discussion:** Denosumab is a very useful addition to the armamentarium of treatments for severe osteoporosis, particularly with coexisting chronic kidney disease or gastrointestinal conditions. It is



well tolerated with few side effects making it a safe as well as convenient treatment for our elderly population.

## P66

### Screening for Poor Outcomes in Hospitalised Older People: The VIP Score (Variable Indicative of Placement Risk) as Predictor of Length of Stay in Hospitalised Older Patients

G Mohamed, S Ahmed, J Clarke, K Kim, J Enkleman, R Mc Govern, E Ahern, PE Cotter

*St Luke's Hospital, Kilkenny, Ireland*

**Introduction:** Older patients are at risk of functional decline and prolonged length of stay. Comprehensive geriatric assessment is of proven benefit in reducing poor outcomes and length of stay, therefore early recognition of and intervention for high risk patients is desired. The aim of our study was to investigate the VIP score as a screening tool for increased length of the stay in hospitalized older people.

**Methods:** The study was a prospective observational study. Consecutive medical admissions age  $\geq 75$  years were included. A VIP score (a simple 3 item screening tool) was obtained from all patients. Patients were classified as high risk if the score was 2 or 3. Age, sex, readmission, death and length of stay were recorded. Univariate comparison, multivariate linear regression and ROC curve analysis were undertaken.

**Results:** 44 patients (32 female) were included. 23 (52.3 %) had a VIP score of 2 or more. Those in this high risk group had a longer length of stay (12.22 vs. 6.67 days,  $p = 0.053$ ) and tended to be older (84.22 vs. 81.72 years,  $p = 0.096$ ). There was no statistically significant difference for the secondary points of readmission (8.7 vs. 9.5 %  $p = 0.93$ ) or death (13.6 vs. 4.8 %;  $p = 0.32$ ). In a linear regression model with VIP score and age ( $R^2 = 12.4$  %;  $p = 0.066$ ), VIP score was an independent predictor of length of stay ( $p = 0.029$ ). As a test for increased length of stay, VIP  $\geq 2$  was a fair predictor (C statistic from area under the ROC curve 0.67).

**Discussion:** This study has confirmed that VIP as very simple item screening tool for hospitalised patients aged 75 years and older is a predictor of length of stay. However, in such a hospital setting, a majority of patients will screen positive by this tool, which has implications on resource use.

## P67

### Are We Ageist When It Comes to Interventional Stroke Studies?

Adriana Hadbavna, Tara Coughlan, Ronan Collins, Des O'Neill

*AMNCH, Tallaght, Dublin, Ireland*

**Introduction:** Stroke is a disease affecting predominantly older adults over 65 years of age with an incidence of only about 25 % in younger patients. Concerns have been raised about the age of participants in interventional stroke studies, studies on which our treatment guidelines are based. Therefore we decided to review the mean age of patients included in these trials.

**Methods:** Data was obtained from the clinical trials government website. We reviewed all closed, completed interventional stroke

clinical trials up to May 2012, which have reported results, for the mean age of patients enrolled. We compared these results with the results from Irish National Audit of Stroke Care (INASC) from 2008.

**Results:** There was total number of 110 closed interventional clinical trials with available results under the search word “stroke”. After a close review only 49 studies in the database were stroke related. The majority of trials (73.4 %) did not have any upper-age cut off, however, the mean age of all patients included in these trials was 65.8 years. This is significantly lower than the mean age of patients that suffered a stroke in Irish hospitals according to INASC, where the mean age was 75 (SD 13) and similarly in UK with a mean age of 75.8 (SD 13.1) according to National Sentinel Stroke Audit 2011.

**Discussion:** This confirms that the mean age of patients enrolled in interventional trials is significantly lower than the mean age of population-based stroke audits performed in UK and Ireland.

Although the complexity and consent issues in the older population may in part explain this, we should strive to ensure that the treatment we are providing to this most vulnerable group is evidence based. Further review of currently on-going clinical trials will be necessary.

## P68

### Timed Up-and-Go Test on Admission and Pre-Discharge for an Intermediate Care Unit

Elizabeth Callaly, Niamh Hannon, Ciara Dowling, S McBride, M Day, Dermot Power, Chie Wei Fan

*Mater Misericordiae University Hospital, Dublin, Ireland*

**Introduction:** There is a growing interest in Ireland in intermediate care units, but research on outcome is lacking. We hypothesise that medically discharged patients transferred to an intermediate care unit (ICU) will continue to improve in mobility function. Our aim is to evaluate mobility function using the timed up-and-go test (TUG) on admission and at discharge/end of study period.

**Methods:** We undertook a pilot prospective observational study at an ICU which serves a Tertiary Referral Acute Hospital. Data collected on consecutive patients transferred to the unit over a 6-week period included sex, age, cognition, fall in the previous year, mobility function. TUG (Podsiadlo 1991, Malone 2002) was measured on admission and repeated on discharge or at the end of the study time period. Results are presented in median (IQR) and Wilcoxon Sign Rank test for pairwise comparisons.

**Results:** Twenty-five patients were admitted, mean age was 76.7 years, 20 (80.0 %) were over 65 years, 14 over 75 years and 17 (68 %) were female. 10 were awaiting nursing home placement, 8 convalescence and 6 home care package. 13 patients had at least 1 fall in the previous year and 20 had MMSE performed (median 19.13, mean 24.3). On admission 19 (76 %) required supervision, 5 required assistance to mobilise and 3 were immobile. Seven patients were discharged during the study period. Of the 22 patients with follow up TUG, 20 had improved TUG. One immobile patient become mobile (TUG = 25 s). TUG at admission and end of study were 18.5 (16.22.91) s and 17 (13, 18.29) s,  $p = 0.0001$ . The median improvement was 2.57 (range 0–46) s.

**Discussion:** Patients transferred to an intermediate care unit following hospital discharge continue to show further improvement in mobility as measured by TUG. From this pilot study, we recommend further research in the effect of intermediate care unit on mobility, functional outcome and discharge destination.



## P69

# An Inpatient Study of the Prevalence of Having a Will and Understanding of Power of Attorney

Anne Marie Liddy, Joanne Kitchen, Shilpa Purushotham, Riona Mulcahy

Waterford Regional Hospital, Waterford, Ireland

**Introduction:** Legal documentation of wills and Power of Attorney (POA) becomes an issue in later life, particularly in the context of dementing illnesses. This survey aimed to determine the percentage of medical inpatients over age 50 that have made a will, to establish their reasons for making a will and to document their understanding of POA.

**Methods:** Random sampling of medical inpatients was carried out. Inclusion criteria included age over 50 and an abbreviated mental test score 7. Baseline demographics were recorded and questions regarding wills and understanding of POA were asked.

**Results:** 60 patients were surveyed (43 % female) with an average age of 72.1 years. 30 (50 %) were married, 21 (35 %) were widows/widowers, 6 (10 %) single and 3 (5 %) were divorced. 20 (33 %) lived alone. 50 (83.3 %) felt it was important to have a will but only 39 (65 %) had made a will. Of those, 38 (97.4 %) used a solicitor to make the will and 1 (2.5 %) made the will with a member of their family. The majority of patients 16 (41 %) made their will to prevent family rows, 13 (21.6 %) to provide for their family, 2 (3.3 %) to avoid dying intestate, 2 (3.3 %) to protect their accumulated assets, and 6 (15.4 %) to give peace of mind. 45 (75 %) did not know the meaning of POA. An explanation and discussion about POA followed. 28 (62.2 %) then felt it was important to assign POA. Of those 15 (25 %) that were familiar with POA, 7 (46.6 %) had assigned POA with the help of a solicitor.

**Discussion:** While the majority of patients had a will ( $^{39}/_{60}$ ), only a minority had assigned POA ( $^7/_{60}$ ) and the term was generally poorly understood. Subsequent explanation of POA significantly changed patients' attitudes. This highlights the need for better patient education regarding important medico legal issues of capacity and documentation of wishes.

## P70

# FDG-PET Imaging in a Memory Clinic: A Useful Diagnostic Tool?

Kevin McCarroll<sup>1</sup>, Eileen Sweeney<sup>1</sup>, Thomas Monaghan<sup>1</sup>, Robert Coen<sup>1</sup>, Niall Sheehy<sup>2</sup>, Conal Cunningham<sup>3</sup>, JB Walsh<sup>3</sup>, Brian Lawlor<sup>1</sup>

<sup>1</sup>Mercer's Institute for Research on Ageing, Dublin, Ireland,

<sup>2</sup>Department of Radiology, St. James's Hospital, Dublin, Ireland,

<sup>3</sup>Department of Gerontology, St. James's Hospital, Dublin, Ireland

**Introduction:** FDG-PET neuroimaging is being used increasingly as a tool in the early diagnosis and differentiation of dementia subtypes, particularly Alzheimer's dementia (AD) and Fronto-temporal Dementia (FTD). We aimed to identify the concordance rate between a clinical diagnosis established at a memory clinic and that identified by FDG-PET.

**Methods:** Patients who attended our Memory Clinic and had a FDG-PET to confirm a diagnosis or to rule out a neurodegenerative cause were identified. Clinical diagnosis was based on a detailed history,

clinical examination, neuropsychological testing and available MRI/CT imaging. Diagnostic categories included AD, atypical AD, FTD, Primary Progressive Aphasia due to possible Alzheimer's (PPA-AD) or FTLD (PPA-FLTD). PET scans were analysed parametrically with Neuro Q software, mapping four regions of the brain, parietal, frontal, temporal lobe and posterior cingulate cortices. Scans were reported by a consultant radiologist with experience in PET neuroimaging.

**Results:** 46 patients were included in the study. 54 % were female and mean age was  $64.9 \pm 7.0$  years. In those with an initial clinical diagnosis ( $n = 36$ ), the concordance rate with PET was 72 %, and was greatest for atypical AD and PPA-AD. In 2 out of 10 patients with a presumed non-neurodegenerative cause, FDG-PET supported a neuro-degenerative aetiology. An initial diagnosis of AD (typical or atypical) or PPA-AD was associated with posterior cingulate ( $p = 0.04$ ) and parietal lobe hypometabolism ( $p = 0.04$ ).

**Discussion:** PET findings were consistent with clinical diagnosis in most cases and were also helpful in ruling in or out a neurodegenerative cause. The hypometabolic pattern identified in patients with AD is consistent with other studies. However, PET findings were sometimes inconclusive and discordant, highlighting the importance of interpreting results in conjunction with a clinical assessment.

## P71

# Carotid Stenosis in the Oldest Old

Karl Boyle<sup>1</sup>, Brendan Browne<sup>2</sup>, Mary-Paula Colgan<sup>1</sup>, Xenia Martin<sup>1</sup>, Sean O'Neill<sup>1</sup>, Prakesh Madhavan<sup>1</sup>, Dermot Moore<sup>1</sup>, Joseph Harbison<sup>2</sup>

<sup>1</sup>St James's Hospital, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland

**Introduction:** Carotid narrowing may be part of the normal ageing process and many very elderly patients likely live with a degree of mild carotid stenosis. This study investigates the prevalence of carotid disease in a clinic-based population ( $n = 770$ ) across various age strata over a 5 year period from 2006 to 2010.

**Methods:** Four randomised age-matched groups of patients (aged 60–98) were identified over a 5 year period from 2006 to 2010. Patients were separated into groups defined by NASCET criteria based on the most severely affected internal carotid artery and then compared against each other to look for a correlation between age and carotid stenosis severity.

**Results:** There was a significantly raised prevalence of  $>50$  % stenosis seen in patients in their 70 s ( $n = 89$ ; 53.29 %) in comparison to patients in their 1990s ( $n = 49$ ; 30.06 %) ( $P < 0.0001$ ). Prevalence of severe stenosis ( $>70$  %) in the 70 years age group ( $n = 51$ ; 30.53 %) was also significantly higher than in the 1990s age group ( $n = 22$ ; 13.49 %) ( $P = 0.0001$ ). Furthermore the prevalence of non-severe carotid stenosis ( $<70$  %) in patients in their 1990s ( $n = 141$ ; 86.50 %) was significantly higher than those who were in their 1960s, 1970s and 1980s combined ( $n = 491$ ; 76.95 %) ( $P = 0.007$ ). The 1970s demographic had the highest prevalence of severe carotid disease (30.53 %) compared to the 1960s (22.48 %), 1980s (17.84 %) and 1990s (13.49 %) age groups.

**Discussion:** These results support our hypothesis that severity of carotid stenosis peaks in a younger hospital population most likely reflecting an increased mortality associated with more severe disease. Patients presenting with severe carotid disease before reaching their eighties are more likely to suffer co-morbidities associated with vascular stenosis such as myocardial infarction and stroke. Our results also showed that carotid narrowing occurs as a normal part of the

ageing process and many very elderly patients live with non-severe carotid stenosis.

## P72

### Dementia: The Experiences of an Acute Medical Service

Mairead Bartley, Michael Barry

*Department of Pharmacology and Therapeutics, St. James's Hospital, Dublin, Ireland*

**Introduction:** The number of people living with dementia in Ireland is expected to triple over the next 30 years. Since dementia is associated with serious medical complications and longer hospital stays, this will have a significant impact on acute hospital services. We aimed to review the prevalence of dementia in acute medical admissions and assess its effect on outcomes in a general medical service.

**Methods:** We prospectively collected data on reason for admission, presence of dementia, age, length of stay (LOS), and clinical outcome on patients admitted on general medical take in a major teaching hospital over a 5-month period.

**Results:** of 290 acute medical admissions, 151 (52 %) were >65 years. The median age was 80 years [Interquartile Range (IQR) 73–84.5 years]. 39 >65 years had a diagnosis of dementia (25.8 % of patients >65 years). Median LOS for patients >65 was 10 nights (IQR 5–23 nights). The commonest reason for admission in patients >65 was acute respiratory disease (36.4 %), followed by heart failure (13.9 %) and stroke (6.6 %). For those with dementia, median LOS was 14 nights (IQR 8.5–40 nights). In the dementia cohort, the commonest reason for admission was acute respiratory disease (30.8 %), followed by falls (20.5 %) and urinary tract infection (17.9 %). 5 patients with dementia died (12.8 % of dementia patients), 22 were discharged home (56.4 %) and 12 (30.8 %) were discharged to, or are still awaiting long term care.

**Discussion:** In our acute general medical service, older people comprised over 50 % of acute admissions. The prevalence of dementia was high and associated with high mortality. With the expected increase in dementia prevalence in the years to come, this highlights the need for extra resources to address the needs of these frail older people.

## P73

### Vertebroplasty: A Case Series in a Specialised Bone Health Service

Niamh Adams<sup>1</sup>, Jaspreet Bhangu<sup>1</sup>, Rosaleen Lannon<sup>1</sup>, Daniel O'Hare<sup>1</sup>, Kara Fitzgerald<sup>1</sup>, Miriam C Casey<sup>1</sup>, Eilish Thornton<sup>2</sup>, Niall McEniff<sup>2</sup>, J Bernard Walsh<sup>1</sup>

<sup>1</sup>Bone Health Service, Mercer's Institute for Research on Ageing, St James's Hospital, Dublin, Ireland, <sup>2</sup>Department of Radiology, St. James's Hospital, Dublin, Ireland

**Introduction:** Vertebroplasty involves percutaneous injection of cement (polymethylmethacrylate (PMMA)) under fluoroscopic guidance into collapsed vertebral bodies. There is evidence for its efficacy in control of pain symptoms in patients with osteoporotic vertebral

collapse. We aim to characterize patients undergoing vertebroplasty and report outcomes and complications.

**Methods:** Eight patients with severe back pain for greater than 6 weeks not responding to analgesia underwent vertebroplasty. All procedures were performed by a consultant radiologist at a tertiary referral institute. Electronic patient record and outpatient letters were retrospectively reviewed. Vertebral fractures were assessed by MRI Spine.

**Results:** All 8 patients were female and average age was 75.1 (range 58–89). DEXA scans showed an average T score in the spine was –3.1.  $\frac{5}{8}$  patients were treated with recombinant parathyroid hormone injections,  $\frac{3}{8}$  were treated with bisphosphonate therapy. All patients were treated with calcium/vitamin D supplementation. Vitamin D levels were suboptimal in  $\frac{5}{8}$  patients (mean 48.6, range 25–62).  $\frac{3}{8}$  had one vertebrae injected,  $\frac{4}{8}$  patients had two vertebrae injected and  $\frac{1}{8}$  patient had three vertebrae injected. All procedures were technically successful. There were no immediate or delayed complications. Immediate improvements in reported pain were observed after treatment. Significant improvements in pain at next outpatient follow-up were similarly reported.

**Discussion:** Vertebroplasty is a safe and effective treatment for pain from osteoporotic vertebral collapse in immediate and short-term outcomes. The tolerability of this procedure makes it an effective treatment option for selected patients. Further research on a long-term benefit of vertebroplasty needs to be undertaken.

## P74

### Prescribing of Night Sedation on Discharge Among Elderly Patients

Maria Smyth, James Mahon, Bridget Kiely, Sarah O'Brien, Diarmuid O'Keefe, JB Walsh

*St James's Hospital, Dublin, Ireland*

**Introduction:** It is well known that benzodiazepines and other forms of anxiolytics/sedatives are addictive and dependence can occur after a short time. Prescribing should be for short courses and on a "PRN" basis. Our hospital guidelines state that they should only be used to treat severe or disabling insomnia and that patients should not be discharged on night sedation unless they have previously been taking them. The aim of this audit was to establish the number of patients discharged on night sedation and compare this to data collected in 2005 and 2007 in similar audits within the same institution.

**Methods:** Retrospective study of discharges from a Medicine for the Elderly department in January 2012. 40 patients were selected at random and their discharge prescription reviewed on the Electronic Patient Record system. Patients were excluded if they had deceased. If a sedative was prescribed, the patient's medical notes were reviewed to find if the patient was on same prior to admission. Data was then compared to that collected in 2005 (76 discharges) and 2007 (79 discharges).

**Results:** A total of 35 discharge prescriptions were reviewed. 11 % (4 patients) were discharged on night sedation, compared with 20 % in 2007 and 28 % in 2005. There was also a reduction in the number of patients discharged on existing sedation, 8.6 %, compared with 13.5 % in 2005 and 12 % in 2007. Furthermore, a significantly reduced number of patients were discharged on new sedation. Only 2.8 % (1 patient) were newly started on night sedation, in comparison with 14.5 and 8 %, in 2005 and 2007 respectively.

**Discussion:** There has been a reduction in the number of discharge prescriptions for sedatives since 2005. Further to this, a reduced

number of patients are being newly started on sedatives which is very encouraging. 8.6 % of admissions were already taking sedatives prior to admission.

## P75

### Atypical Femoral Fractures: A Case Series in a Specialised Bone Health Service

Niamh Adams, Jaspreet Bhangu, Daniel O'Hare, Georgina Steen, Rosaleen Lannon, Miriam C Casey, J Bernard Walsh

*Bone Health Service, Mercer's Institute for Research on Ageing, St James's Hospital, Dublin, Ireland*

**Introduction:** Atypical fractures are defined as femoral shaft fractures associated with minimal trauma and a unique radiological appearance. These typically occur in patients prescribed bisphosphonate therapy for over 5 years. Studies<sup>1</sup> estimate that 0.005 % of femoral fractures can be classified as atypical. We aim to estimate the incidence of atypical fractures in a cohort attending a bone health clinic as well as patient characteristics and bone turnover markers.

**Methods:** Cases were identified from a database of 4,500 patients attending a bone health clinic in a tertiary referral centre. 3 cases were identified which met the criteria for atypical fractures. Electronic patient record and outpatient letters were retrospectively reviewed.

**Results:** All patients were female with age ranging from 54 to 82 years. Incidence of atypical fractures was 0.006 %. All patients had minimal trauma. 2 suffered sub-trochanteric fractures and one was mid-diaphyseal. 2 were treated with intramedullary nailing and one was managed conservatively as stress fracture. All patients were on bisphosphonates at the time of fracture. All patients were confirmed osteoporosis by DXA scanning with average femur T score of  $-1.7$  and spine T score of  $-2.8$ . 2 patients had suboptimal vitamin D levels (61, 69). CTX a marker of bone resorption was decreased in all patients (average 0.086, normal  $>0.1$ ).

**Discussion:** Atypical fractures are a rare type of femoral fractures which are associated with prolonged bisphosphonate use. A CTX level  $<0.1$  ng/ml may be associated with an increased risk of atypical fractures.<sup>2</sup> Further studies are required to ascertain risk factors for these and to guide use of appropriate bone therapy.

#### References:

<sup>1</sup>Schilcher J et al (2011) Bisphosphonate use and atypical fractures of the femoral shaft. *New Eng J Med* 364:1728–1737

<sup>2</sup>Marx RE et al (2007) Oral bisphosphonate-induced osteonecrosis: risk factors, prediction of risk using serum CTX testing, prevention, and treatment. *J Oral Maxillofacial Surg* 65(12):2397–410.

## P76

### Audit of Electronic Discharge Summaries in a Medicine for the Elderly Department

Maria Smyth, James Mahon, Sarah O'Brien, Diarmuid O'Keeffe, JB Walsh

*St James's Hospital, Dublin, Ireland*

**Introduction:** In our large teaching hospital electronically completed patient discharge summaries are an important means of

communication with general practitioners, as well as maintaining accurate records of inpatient stays and providing the hospital with budgetary information. The aim of the audit was to assess whether summaries met the current hospital guidelines, which state that a discharge summary must be completed on all patients discharged from hospital.

**Methods:** 40 discharge summaries were selected at random from a list of patients discharged in the month of January 2012 under 6 different Medicine for the Elderly Consultants. A check of how thoroughly the summaries were completed was then performed on the electronic patient record system using a list of 12 questions.

**Results:** 40 patients: 16 male; 24 female. 0 patients did not have a summary completed. 100 % had admission reason listed, of which all had good correlation with record of progress during inpatient stay. Only 14 % had the discharge summary entirely completed, 63 % had all investigations findings included. 97 % had discharge medications listed, significantly 86 % did not have a duration of prescription. 80 % had current medical diagnosis listed and 60 % had previous diagnoses listed. 80 % had outpatient follow up recorded, 46 % had specific follow-up noted. 31 % had General Practitioner (GP) recommendations and 94 % had contact details included.

**Discussion:** In general, summaries were very well completed, however, improvements need to be made with regard to completing the duration of prescription, providing more accurate details of in-hospital investigations performed, previous diagnoses and specific follow-up. The audit highlights the need to fully complete discharge summaries in order to provide an accurate summary of patient progress, to avoid confusion by GPs and document 'not applicable' to a section of the summary if that is the case. It also demonstrates the importance of documenting duration of prescriptions.

## P77

### Persistence and Dose Escalation of Anti-Dementia Medications

Linda Brewer<sup>1</sup>, Kathleen Bennett<sup>2</sup>, David Williams<sup>1</sup>

*<sup>1</sup>Department of Stroke and Geriatric Medicine, Royal College of Surgeons of Ireland, Dublin, Ireland, <sup>2</sup>Department of Pharmacology and Therapeutics, Trinity Centre for Health Sciences, Dublin, Ireland*

**Introduction:** Anti-dementia (AD) medications are widely used with studies reporting improvements in cognitive scores, function and behaviour. However, low persistence and inappropriate dose-titration may affect outcomes. This study examines persistence and dose-titration of AD medications in the 'real world' setting.

**Methods:** The Irish HSE Primary Care Reimbursement Services (PCRS) pharmacy database was used to define a retrospective cohort (2007–2010) of those aged  $\geq 70$  years. Non-persistence was defined by a refill gap of  $>63$  days at 6 months. Logistic regression was used to examine predictors of persistence at 6 months. Odds ratios (OR) and 95 % confidence intervals (CIs) are presented. The rate of dose-maximisation over time was also examined.

**Results:** During this period, 15,549 patients (with  $\geq 6$  months follow-up) initiated AD medications. Donepezil and memantine were the most commonly prescribed ( $n = 13,781$ , 88.6 %). Persistence with therapy was 69 % at 6 months. Older age (75+ vs. 70–74 years; OR = 0.84, 95 % CI 0.75, 0.93) and the prescription of rivastigmine (compared to donepezil; OR = 0.85, 95 % CI 0.75, 0.97) was associated with lower persistence. Persistence was higher

following more recent drug initiation (2010 vs. 2007; OR = 1.23, 95 % CI 1.1, 1.38). Most patients on donepezil achieved the maximum dose of 10 mg daily (9,634, 86 %), but only two-thirds for at least 2 consecutive months (7,305, 65.2 %). Similarly for memantine, maximum dose (20 mg) was achieved in the majority (4,941, 89.7 %), but maintained for at least two consecutive months in 69.8 % of cases.

**Discussion:** This study gives first insights into dosing trends of AD medications outside the clinical trial setting. Despite most being prescribed maximum doses of donepezil and memantine, only two-thirds maintained this dose for at least two consecutive months. Persistence with medication was relatively low. As part of the Irish National Dementia Strategy (2013) there is scope to introduce clearer national guidance on optimising the prescribing of AD medications in future dementia care.

## P78

### Instrumental Activities of Daily Living and Their Relationship to Diet and Vitamin Levels: The Dublin Healthy Ageing Study

David Robinson, Ai-Vryn Chin, Henry O'Connell, Fiona Hamilton, Irene Bruce, Robert Coen, John Scott, Anne Molloy, Brian Lawlor, Conal Cunningham

*Mercer's Institute for Research on Ageing, St James's Hospital, Dublin, Ireland*

**Introduction:** Diet is a determinant of healthy ageing. Physical frailty, including ability to perform activities of daily living (ADL's), can impact upon the ability to maintain a healthy diet. However, an individual's social network may alter the relationship between ADL's and dietary quality. The purpose of this study was to examine the relationship between ADL's, intake of fortified food, family support and serum markers of vitamin B12 status.

**Methods:** The Dublin Healthy Ageing study examined the physical, cognitive and social status of a group of non-demented community dwelling elderly, selected from the lists of local general practitioners. Domiciliary assessments included tests of cognition (Mini-Mental State Examination (MMSE)), ADL's (Lawton and Brody), life satisfaction, and depression (C-ESD). Patients were questioned regarding medications, intake of food fortified with B vitamins, and frequency of seeing relatives. Serum was drawn for vitamin B12, folate levels, and homocysteine.

**Results:** ADL questionnaires were performed on 314 consecutive subjects. 8 received parenteral vitamin B12 and were excluded from analysis. 57 patients required help with shopping, while 249 were independent. Those unable to shop for themselves were older (78.4 vs. 75,  $p < 0.001$ ), with lower life satisfaction scores (11.79 vs. 14.5,  $p < 0.001$ ), higher depression scores (13.21 vs. 6.29,  $p < 0.001$ ) and lower MMSE scores (25.3 vs. 26.2,  $p < 0.05$ ). However, persons unable to shop were more likely to see their relatives every day (67.9 vs. 37.1 %,  $p < 0.001$ ), were more likely to have a diet containing fortified food (40.9 vs. 17.7 %,  $p < 0.01$ ) and were less likely to be vitamin B12 deficient (0 vs. 8.8 %,  $p < 0.005$ ).

**Discussion:** In this sample of community-dwelling adults, people independent in shopping had poorer diets than those who depended on others; they were more likely to be vitamin B12 deficient and saw their relatives less often. Relatives may influence the relationship between frailty and vitamin status.

## P79

### Vitamin D and Falls: Exploring the Relationship in Older Adults

Kevin McCarroll<sup>1</sup>, Miriam Casey<sup>2</sup>, JB Walsh<sup>2</sup>, John Scott<sup>3</sup>, Anne Molloy<sup>3</sup>, Martin Healy<sup>4</sup>, Helene McNulty<sup>5</sup>, JJ Strain<sup>5</sup>, Conal Cunningham<sup>2</sup>

<sup>1</sup>*Mercer's Institute for Research on Ageing, Dublin, Ireland,*

<sup>2</sup>*Department of Gerontology, St. James's Hospital, Dublin, Ireland,*

<sup>3</sup>*Department of Biochemistry, Trinity College, Dublin, Dublin,*

*Ireland,* <sup>4</sup>*Department of Biochemistry, St. James's Hospital, Dublin, Ireland,* <sup>5</sup>*Biomedical Sciences Research Institute, University of*

*Ulster, Coleraine, Ireland*

**Introduction:** Numerous studies support a role for vitamin D in the prevention of falls. However, it is not clear which target group benefit most from supplementation. Studies suggest that a 25 hydroxyvitamin D [25(OH)D] level of 60 nmol/l is required for falls prevention and that the effect may be greater in females with increased frailty. We aimed to explore this relationship in frail older adults attending an outpatient service.

**Methods:** An analysis of data obtained from participants of the TUDA (Trinity, University of Ulster, Department of Agriculture) cross sectional study was performed. Participants were community dwelling adults aged over sixty who attended a geriatric outpatient service. Those taking vitamin D supplements or cod liver oil were excluded in the analysis. All subjects underwent a detailed assessment which included recording of medical history including falls status in the last year, completion of the Timed Up-and-Go (TUG), Centre for Epidemiologic Studies Depression Scale (CES-D) and Mini Mental State Examination (MMSE). Serum 25(OH)D was measured with liquid chromatography mass spectrometry (LCMS).

**Results:** 391 subjects were included in the study. 62 % were female and overall mean age was  $80.0 \pm 6.7$  years. A reduced risk of falls ( $\geq 1$ ) in the previous year was found in the highest ( $>45.3$  nmol/l) versus the lowest ( $<17.6$  nmol/l) quartile of 25(OH)D, both before and after adjustment for age, gender, month, body mass index, global solar radiation, sun holiday travel and orthostatic symptoms (OR 0.43, 95 % CI 0.26–0.86,  $p = 0.02$ ). This relationship remained significant after further adjustment for depression (CES-D  $\geq 16$ ), cognition (MMSE), physical frailty (TUG), serum calcium and PTH levels.

**Discussion:** The findings suggest a role for vitamin D in falls reduction independent of its effect on Timed Up-and-Go, serum calcium and PTH levels.

## P80

### Vascular Risk Factors and Functional Impairment in Community Dwelling Older Adults in the West of Ireland

Michelle Canavan<sup>1</sup>, Andrew Smyth<sup>2</sup>, Emer McGrath<sup>2</sup>, Liam Glynn<sup>2</sup>, Andrew Murphy<sup>2</sup>, Eamon Mulkerrin<sup>1</sup>, Martin O'Donnell<sup>1</sup>

<sup>1</sup>*Univeristy Hospital Galway, Galway, Ireland,* <sup>2</sup>*National University of Ireland, Galway, Ireland*

**Introduction:** Preservation of functional independence is the single most important factor of 'successful ageing' reported by older people.<sup>1</sup> Vascular risk factors may increase the risk of functional



impairment (FI) due to covert/subclinical disease, independent of major vascular events. We aimed to determine the independent association between vascular risk factors and functional impairment (FI), defined as any impairment in basic or instrumental activities of daily living (ADL).

**Methods:** The CLARITY study is a cross-sectional study of 9,816 community-dwelling older adults in the West of Ireland and a sample completed standardized self-reported health questionnaires. Logistic regression analyses were used to determine the independent association between vascular risk factors and FI.

**Results:** 3,499 patients were included; 45.6 % were male and mean age was  $66.2 \pm 10.3$  years. FI was present in 40.4 % ( $n = 1,413$ ) and cardiovascular disease was associated with a doubling of risk of FI ( $p < 0.001$ ). On univariate analysis, age, male gender, vascular risk factors (smoking, diabetes, hypertension, atrial fibrillation (AF), alcohol consumption) and history of stroke, heart disease and vascular disease were significantly associated with FI ( $P < 0.05$ ).

On multivariable analysis (adjusted for all variables), older age (OR 1.03 [1.02, 1.04]), smoking (OR 1.43 [1.08, 1.89]), AF (OR 1.68 [1.07, 2.65]), and prior stroke (OR 1.91 [1.24, 2.93]) were associated with an increased risk of FI. Age leaving education (OR 0.96 [0.94, 0.99]), non-use of alcohol (OR 0.76 [0.61, 0.93]) and increased HDL levels (OR 0.70 [0.56, 0.88]) were associated with a reduced risk of FI.

**Discussion:** Many vascular risk factors are associated with functional impairment, independently of major vascular events. The effect of RF modification on functional outcomes requires more attention in clinical trials.

#### Reference:

<sup>1</sup>Newman AB, Arnold AM, Naydeck BL et al (2003) Successful Aging: Effect of Subclinical Cardiovascular Disease. *Arch Intern Med* 163(19):2315–2322.

## P81

### Closing the Audit Loop: Stroke Care in a University Hospital Three Years On

Michelle Canavan<sup>1</sup>, Andrew Smyth<sup>2</sup>, Patricia Guilfoyle<sup>1</sup>, Helen O'Brien<sup>1</sup>, Amjad Khan<sup>1</sup>, Bernadette McGuinness<sup>1</sup>, Shaun O'Keeffe<sup>1</sup>, Martin O'Donnell<sup>1</sup>, Thomas Walsh<sup>1</sup>, Eamon Mulkerrin<sup>1</sup>

<sup>1</sup>University Hospital Galway, Galway, Ireland, <sup>2</sup>National University of Ireland, Galway, Ireland

**Introduction:** A previous audit in 2008<sup>1</sup> highlighted shorter mean length of stay (LOS), more strokes treated in Stroke Unit (SU), improved CT provision within 24 h of stroke and poor documentation of weight and mood assessment compared to a baseline audit in 2005.

**Methods:** 136 patients referred to the stroke service between January and July 2011 were prospectively reviewed using similar methodology to previous<sup>1</sup> and outcomes were compared to key indicators of care from the National Sentinel Audit of Stroke Care 2006 (UK). Non-stroke admissions were excluded from analysis ( $n = 22$ ).

**Results:** Of 114 admissions, there were 106 acute strokes and 8 trans-ischaemic attacks (TIAs). Mean age was  $74 \pm 14$  years and 52 % were female. 88 % were treated in SU (vs. 67 % in 2008,  $p < 0.001$ ), of which 67 % were directly admitted. 82.5 % had CT brain within 24 h of stroke (96 % in 2008,  $p = 0.001$ ). Of patients with acute ischemic stroke 6 % received thrombolysis (vs. 4.9 % in 2008,  $p = 0.86$ ) and 89 % started aspirin within 48 h (93 % in 2008,  $p = 0.34$ ). Mean total LOS increased by 14–33 days ( $p = 0.002$ ) and in-hospital mortality decreased by 2.5 % (14.8 % in 2008 vs. 12.3 % in 2011,  $p = 0.61$ ).

Although access to multidisciplinary assessments improved, only 41 % had speech and language therapy (SLT) assessment within 24 h (vs. 61 % in 2008,  $p = 0.028$ ). Compared to 2008, there were 37 and 31 % improvements in documentation of mood ( $p < 0.001$ ) and weight ( $p < 0.001$ ) respectively. Of discharges, 85 % went home, 13 % to Long Term Care (LTC), and 2 % to other hospitals.

**Discussion:** While access to evidence-based interventions improved from 2008 to 2011, there were care-gaps identified in access to diagnostic testing, SLT assessment, and LTC placement.

#### Reference:

<sup>1</sup>Lannon R, Smyth A, Mulkerrin EC (2011) An audit of the impact of a stroke unit in an acute teaching hospital. *Ir J Med Sci* 180(1):37–40.

## P82

### Rapidly Progressive Dementia: A Case Report

Aimy Abdullah, Paul McElwain, Josie Clare

Waterford Regional Hospital, Waterford, Ireland

**Case Presentation:** A 78 year old lady who had been medically well and cognitively intact presented to the Medical Assessment Unit with a 3 week history of dizziness, disorientation and impaired concentration. Initial assessment revealed Mini Mental State Examination (MMSE)  $^{25}/_{30}$ , positive Rombergs and bilaterally up-going plantars. CT brain was unremarkable. B12 levels were low and replacement therapy was commenced. She represented a week later with worsening symptoms and decreased mobility. She was slow, vague and apathetic. Urinalysis was abnormal and the diagnosis was thought to be delirium secondary to urinary tract infection and B12 deficiency. Despite appropriate treatment she continued to deteriorate. She exhibited very unusual behaviour, including constantly talking to herself whilst sat on the edge of the bed, falling asleep in this position and mistaking the nurse trolley for a dog. Encephalitis was considered but standard lumbar puncture analysis was unremarkable. Old age psychiatry review did not elicit any features of affective or psychotic illness. Ten days post admission, MMSE was  $^{16}/_{30}$ , and her mobility continued to deteriorate. Three weeks post admission she became increasingly drowsy, and when roused would stare into space, not respond verbally and had obvious visual hallucinations. She was agitated when handled. Four weeks post admission she developed myoclonic jerks. Sporadic Creutzfeldt-Jakob disease (sCJD) was suspected. She was too unwell to be transferred out of hospital for an EEG and lumbar puncture wasn't repeated. The patient passed away 2 months into admission and autopsy confirmed the diagnosis of sCJD.

**Discussion:** sCJD remains rare with only 45 confirmed cases in Ireland since 1998. The presentation of an unusual delirium picture with progressive deterioration in a previously very well patient should alert clinicians to the possibility of a rapidly progressive dementia. There are a variety of aetiologies, but Creutzfeldt-Jakob disease (CJD) is the most concerning.

## P83

### A Stroke Communication Tool for the iPad: Experiences of User-Centered Design in the Clinical Environment

Christopher Soraghan, Laura Coleman, Tim Foran, Katie Walsh, Emer Foley, Claire Collins, Fran Hegarty, Gerard Boyle



*St James's Hospital, Dublin, Ireland*

**Introduction:** Clinicians tend to outsource App development. However, this suffers from lack of flexibility in design, and absence of continuing research and version upgrades. Within a clinical environment and with limited resources, the authors wanted to determine if internal development on pervasive handheld devices was feasible. Many potential clinical applications have been identified which could benefit from this internal resource. Thus, a collaborative study was initiated between Speech and Language Therapy (SLT) & Medical Physics and Bioengineering Departments (MPBE) on a communication tool for stroke patients presenting with aphasia.

**Methods:** As part of the interdepartmental collaboration a researcher from MPBE self-trained in iOS (2 weeks) and attended a 5-day iOS course. After initial concept-Apps were developed (on a MacBookPro and iPad2), SLT produced design requirements for patients with aphasia. MPBE provided expertise on development capabilities and limitations. A prototype App was developed that enabled patients to effectively choose images and short phrases relevant to a breakfast setting and a synthesised voice speaks the resulting text. An onsite clinical photographer provided photos. Feedback was gathered for the App from MPBE, SLT, and 3 stroke patients. A feedback questionnaire by the technical team was augmented by SLT to ensure accessibility of information for the patients. The developer observed the patient feedback sessions.

**Results:** 20 concept-design Apps were developed within a week of the iOS course. Patient feedback on the App overall was positive. Nevertheless, expert observation found that iterative design was required to tailor-make the App for patients with aphasia (e.g. visio-spatial neglect, agaphia).

**Discussion:** SLT and MPBE teamwork was instrumental in achieving the development of a suitable App for patients with aphasia by iterative design and development of a user-centered design process. A resource now exists for clinician-led initiatives in App development with relative ease, benefiting from partners operating in the same environment.

## P84

### Polypharmacy and Inappropriate Prescribing: How Well are We Doing?

Aimy Abdullah, Riona Mulcahy, Josie Clare

*Waterford Regional Hospital, Waterford, Ireland*

**Introduction:** Polypharmacy and Inappropriate Prescribing (IP) are common in older patients. This increases the risk of medications being missed or duplicated, and drug—drug and drug—disease interactions. This potentially leads to significant morbidity and mortality and impacts on healthcare burden.

**Methods:** Inpatients over the age of 65 in a regional hospital were randomly selected. Medications were reviewed using the Screening Tool of Older Persons' potentially inappropriate Prescription (STOPP) and the Screening Tool to Alert doctors to Right Treatment (START) to identify both over (STOPP) and under (START) Potentially Inappropriate Prescribing (PIP). We also looked at medications listed on admission to identify potential prescribing errors from admission.

**Results:** 65 patients (58 % females), mean age 78.8 years (range 65–97) were reviewed, with mean inpatient stay of 12.2 days. 31

(47 %) medical, 11 (16 %) surgical and 23 (35 %) orthopaedic patients were selected. 42 (64 %) were previously known to geriatric services. 66 % presented from the local community, 24 % were transferred from other hospitals, 6 % from residential care and 3 % from nursing homes. From admission notes we found that 30 % had incomplete list of medications, with incomplete doses being the commonest omission. From the drug kardexes a mean of 8.1 medications were charted as regular medications not including short term medications e.g. antibiotics. We identified 115 PIPs in 46 (70 %) patients. 80 were potentially dangerous prescribing, and 35 potentially beneficial omissions. Of PIPs identified, the commonest overprescribing was for anti-platelets, loop diuretics and long acting benzodiazepines. These medications had been prescribed but not continuously reviewed to see if they could or should be stopped.

**Discussion:** This study highlights that potentially inappropriate prescribing in older patients remain a significant problem. The need for accurate documentation of medications on admission, education, pharmacy input and regular review of medications is of paramount importance for older patients admitted to hospital.

## P85

### An Exploration of Community Presence for Older People with an Intellectual Disability

Mary McCarron, Darren McCausland, Eilish Burke, Janet Swinburne, Rachael Carroll, Philip McCallion

*Trinity College Dublin, Dublin, Ireland*

**Introduction:** Increased participation in 'the community' has long been accepted as a route for providing people with intellectual disabilities (PWID) with a better life but there have been concerns that many PWID placed in the community still live isolated lives. This paper examines the experiences of community for PWID in Ireland.

**Methods:** The first wave of the Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS-TILDA) included a series of questions for PWID on aspects of their membership in their local communities. Data was collected from a representative sample of 753 participants with intellectual disability aged 40 and over randomly selected from Ireland's National Intellectual Disability Database (NIDD). The interview protocol included questions on aspects of community living and their linkage to quality of life.

**Results:** Predominantly the people interviewed lived in community settings (semi-independently, in community group homes or with families). Linkages to families and friends were not a major life experience for many, but 88 % identified engaging regularly in social activities, usually with paid staff (79 %); and 10 % reported actively helping their neighbours; 84 % reported feeling happy most of the time but 89 % were lonely at least sometimes and 32 % reported mental health concerns. Difficulty participating in social activities was significantly associated with feeling lonely ( $= 14.58$ ,  $p$  value  $< 0.001$ ), self-rated mental health ( $= 30.74$ ,  $p$  value  $< 0.001$ ) and having someone to confide in ( $= 49.37$ ,  $p$  value  $< 0.001$ ).

**Discussion:** "Belonging" or actively engaging on one's community turns community into a social as well as physical construct. The data in this study supports that there have been efforts to increase integration and belonging, but that there remain challenges to be overcome.

## P86

# Errors While Rewriting Drug Prescription Records on a “Long Stay” Ward

Kirstyn P James, Subhasish Sengupta

*Our Lady of Lourdes Hospital, Drogheda, Ireland*

**Background:** Prescribing errors result in thousands of deaths every year. Rewriting drug prescriptions is a high risk time for errors. The Royal College of Physicians (RCP) UK guidelines state that safe prescribing should include accurate patient identification (at least 3 forms), documentation of allergies/adverse reactions, accurate documentation of generic drug name, dose, frequency and duration. Prescribers should also identify themselves clearly. This audit aimed to assess adherence to these guidelines.

**Methods:** A point prevalence audit of drug prescriptions records (DPRs) was conducted on the “long stay” ward with no exclusion criteria. 19 patients were included (mean age 78.2 years  $\pm$  11.1) who were awaiting long term care. All of these patients had prolonged hospital admissions with DPRs rewritten regularly.

**Results:** The mean number of drugs prescribed per DPR was 13.6  $\pm$  4.9. 63.3 % (n = 164) of prescriptions used generic drug names. 84 % of DPRs had 3 forms of patient identification. 42.1 % (n = 8) did not have any allergy/adverse reaction status recorded. 100 % of individual prescriptions were signed by the prescriber. 100 % of prescriptions had a start date, however due to a lack of designated space on our centre’s DPR, there was 0 % compliance with documenting estimated drug duration. There was 100 % compliance with drug dose and frequency.

**Discussion:** This audit highlights the importance of vigilance while rewriting prescriptions, particularly in groups who have prolonged hospital stays. The most obvious shortcomings were in documenting allergy status and the use of generic drug names.

## P87

# The Impact in Ireland of Caring for an Ageing Family Member with an Intellectual Disability

Mary McCarron, Marriane Griffiths, Eilish Burke, Janet Swinburne, Rachael Carroll, Philip McCallion

*Trinity College Dublin, Dublin, Ireland*

**Introduction:** Although the Irish government policy and research have endorsed the benefits for people with intellectual disabilities (PWID) of living with family, caregiver stress and burden have also been noted, as well as increasing needs as caregivers themselves age. This paper will examine the challenging and positive aspects of caring for a family member including the impact on caregiver health and social needs.

**Methods:** Among the 753 PWID interviewed as part of the first wave of the Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS-TILDA) were a number of individuals living with family and among these 47 caregivers completed an additional protocol gathering demographics of the carers, employment status, support provided to the person, the experience of caregiving, the positive aspects of a supportive role, carer health and planning for the future. There were also several opportunities for open-ended responses.

**Results:** Established level of intellectual disability (ID) among care recipients living with a family member were mild (26 %), moderate (49 %) and severe or profound (6.4 %). Family carers (40 % were over 65 years old themselves) frequently supported the PWID with activities of daily living (ADLs) and intellectual activities of daily living (IADLs); 21 % felt that their health was suffering with anxiety and depression also reported and 37 % reporting back pain in the previous 12 months. Carers addressed their hopes and worries for the future for themselves and the person for whom they provided care. Carers also identified the services that they would like to receive with better access to respite frequently cited.

**Discussion:** Findings for family carers in Ireland were similar to those reported in the international studies of caring/caregiving. The feasibility of examining relationships between PWID health and other needs and the care concerns experienced by carers was also demonstrated.

## P88

# Stroke Thrombolysis: Correlation Between Radiological Assessments and Clinical Outcomes

Terence Farrell<sup>1</sup>, Kieran Carroll<sup>2</sup>, Rory McGovern<sup>1</sup>

<sup>1</sup>Stroke Service, St Luke’s General Hospital Kilkenny, Kilkenny, Ireland, <sup>2</sup>Department of Radiology, St Luke’s General Hospital Kilkenny, Kilkenny, Ireland

**Introduction:** We present a review of all thrombolysed strokes between October 2008 and December 2011 and evaluate for correlation between radiological assessments and clinical outcomes.

**Methods:** Data was gathered on 39 consecutive patients who received intravenous thrombolysis. Pre-thrombolysis CT brains (CTB) were reviewed for the presence of early ischaemic changes (EIC). Post-thrombolysis CTB were assessed for haemorrhage and ischaemic changes. These findings were correlated with NIH Stroke Scale (NIHSS), length of stay (LOS), discharge destination and Rankin scores. Time from symptom onset to initial CTB was noted. Point-biserial correlation coefficient (rpb) was used to assess for correlation.

**Results:** 41 % (<sup>16</sup>/<sub>39</sub>) of admission CTB showed evidence of EIC. Mean time from symptom onset to pre-thrombolysis CTB was 132 min (148 min with EIC vs. 114 min without EIC, *p* value <0.05). <sup>35</sup>/<sub>39</sub> had a repeat CTB 24 h post-thrombolysis which showed middle cerebral artery (MCA) infarct in 82.8 % (29), 0 ischaemia in 17.2 % (6) and 5 (14.3 %) post-thrombolysis haemorrhages. Mean NIHSS was 13.4 on admission and 9.3 post-thrombolysis. Absence of ischaemic changes on post-thrombolysis CTB correlated with a Rankin score of  $\leq 2$  (rpb = 0.55), a significantly shorter mean LOS (6 vs. 25 days, *p* value <0.05, rpb = 0.3) and discharge to home (80 %, rpb = 0.3). The presence of EIC on pre-thrombolysis CTB did not correlate with worsening NIHSS (rpb = -0.02), LOS (rpb = 0.09) or discharge destination (rpb = -0.09). Rankin score was  $\leq 2$  (non-minimal disability) in 52 % and  $> 2$  (moderate-severe disability) in 48 %. Discharge destination from hospital included 19 (48.7 %) home; 13 (33.3 %) rehab; and 3 (7.7 %) long-term care, with 4 (10.3 %) in-hospital mortalities.

**Discussion:** Our review showed a correlation between post-thrombolysis CTB findings and Rankin score, LOS and discharge destination. The presence of EIC on pre-thrombolysis CTB didn’t correlate with NIHSS, Rankin score, LOS or discharge destination. This may have been secondary to a significant difference in time of symptom onset to scanning in the EIC versus no-EIC group. Selecting

patients likely to benefit from stroke thrombolysis based on radiological findings remains a challenge.

## P89

### A Study of PTH Response to Hypo-vitaminosis D in a Specialist Bone Health Clinic

Rosaleen Lannon, Najia Siddique, Georgina Steen, MC Casey, JB Walsh

*Bone Health Service, Mercers Institute for Research on Ageing, St James's Hospital, Dublin, Ireland*

**Introduction:** Functional hypo-parathyroidism was a term used to describe the then novel finding in 2001 during the Nottingham Neck of Femur study, of blunted serum parathyroid (PTH) response to hypo-vitaminosis D. This study recruited 150 patients with recent hip fracture looking at prevalence of hypo-vitaminosis D and its effects on the calcium-vitamin D-parathyroid hormone endocrine axis, bone mineral density and type of fracture. It was postulated that this effect could be protective against PTH mediated bone loss. Recently a Japanese study suggested functional hypo-parathyroidism might be a risk factor for bone fragility in vitamin D insufficiency rather than protective.

**Methods:** We retrospectively reviewed data on patients attending our bone service who had a serum Vitamin D level of <30 nmol/L on first contact with the service. Patients were categorised as functional hypo-parathyroid where their serum parathyroid hormone level remained within normal limits.

**Results:** 239 patients were identified. Of these, 170 had serum PTH levels within the normal range in our laboratory (15.0–65.0 pg/ml). Mean PTH was 40.4 pg/ml  $\pm$  12.8. There remained many similarities between the 2 groups such as similar fracture rates, serum calcium levels, and serum PINP; a marker of bone formation. However there were more classical fragility fractures in the functional hypo-parathyroid group. We also noted a trend towards lower CTX; a marker of bone resorption. This is not explained by differences in bone medication use as 75 % were not on such medication. This is also at a lesser rate than the hyper-parathyroid group. We also noted increased use of statins in the functional hypo-parathyroid group though equal rates of proton pump inhibitors. Impact of this is unclear.

**Discussion:** Subjects with blunted PTH response to hypo-vitaminosis D appear to have better bone density and less bone resorption though an unaffected fracture rate.

## P90

### IV Bisphosphonates in Osteoporosis: Is Full Dose of Zoledronic Acid Really Necessary?

Najia Siddique<sup>1</sup>, Daniel OHare<sup>1</sup>, Aoife Quinn<sup>1</sup>, Cathal Walsh<sup>2</sup>, Tracy Byrne<sup>1</sup>, MC Casey<sup>1</sup>, JB Walsh<sup>1</sup>

<sup>1</sup>Bone health services, Mercers institute for Research on Ageing at St. James's Hospital, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland

**Introduction:** The aim of the study was to establish the degree of bone suppression obtained in osteoporotic patients given either full or

half dose of intravenous Zoledronic acid (ZA) for the first year of treatment.

**Methods:** 190 patients on ZA for osteoporosis were consecutively followed up over 1 year. Patients were given either full dose 4 mg or half dose 2 mg of ZA. Bone markers including CTX (bone resorption), PINP, OC (bone formation), Parathyroid hormone (PTH), Calcium (Ca), and 25(OH)D were measured pre treatment and at 9–12 months pre next infusion. Ca and 25(OH)D were also measured at 2 weeks post 1st infusion. Statistical analysis was performed using student *T* test and Mann–Whitney test.

**Results:** Baseline values were: Mean T score:  $-2.8 \pm 0.6$  at spine,  $-3.1 \pm 0.9$  at hip. PTH 35 (10–65 pg/ml); PINP, OC and CTx: 80, 15 and 0.01 ng/ml respectively. Post 1st infusion they all dropped significantly to: PINP 20 ( $P < 0.001$ ), OC 15 ( $P < 0.006$ ), CTX 0.02 ( $P < 0.0001$ ).

**Discussion:** Normally the bone markers are suppressed if there is a response to the treatment. ZA is very effective in reduction of bone resorption as seen in our study. No significant difference was observed in biochemical effect with 2 mg or 4 mg of ZA over an year. Also Ca or 25(OH)D didn't change significantly at 2 weeks post 1st infusion. Given this biochemical effect it is envisaged that similar BMD gains might follow in both groups irrespective of ZA dose. Clearly, there is a subset of patients who are most appropriate to be treated with lower dose i.e with CRF, Low BMI, drug allergies or old age (probable decreased renal function). This study is very promising to get them the low dose ZA with fewer side effects while maintaining the same response as with the full dose. We would further extend this study in future, to investigate the BMD response with low dose ZA in our patients.

## P91

### Does Inattention Predict Cognition in an Older Out-Patient Population?

Paul McElwaine<sup>2</sup>, Niamh O'Regan<sup>3</sup>, Aimy Abdullah<sup>1</sup>, Yang Gao<sup>3</sup>, Josie Clare<sup>1</sup>, Suzanne Timmons<sup>4</sup>

<sup>1</sup>Waterford Regional Hospital, Waterford, Ireland, <sup>2</sup>Cork University Hospital, Cork, Ireland, <sup>3</sup>University College Cork, Cork, Ireland, <sup>4</sup>South Infirmary Victoria Hospital/St. Finbarr's Hospital, Cork, Ireland

**Introduction:** Many cognitive tests include attention tests, such as the Mini Mental State Examination (MMSE –spelling WORLD backwards (WB) or serial subtractions in 7s), and the 6-item Cognitive impairment test (6-CIT—reciting months backwards (MB) and counting backwards from 20 to 1). The Spatial Span Forwards (SSF) is a non-verbal attention test used in delirium screening, based on correctly copying sequences of coloured boxes on plain paper.

**Methods:** 99 non-selected patients at geriatric clinics had MB, 20-to-1, SSF, serial-7 s and WB performed in random order, as well as MMSE and an estimated Clinical Dementia Rating scale (CDR—scored by the geriatrician based on the clinic interview rather than the official CDR worksheet). An MMSE score <25 was abnormal, and a CDR >4 indicated possible dementia. Statistical analysis for each attention test included the area under the curve (AUC), sensitivity, specificity, and correlation with MMSE/CDR.

**Results:** The median MMSE was 24 (4–30) and 28.3 % of patients had a CDR >4. An SSF score of <4 had the best AUC (0.86) for CDR-defined dementia (sensitivity 0.9, specificity 0.83), but performed similarly to the other tests for MMSE (AUC 0.74 for all

except MB). WB, 20–1 and serial-7 s performed similarly in predicting CDR-defined dementia (AUC 0.73–0.77). The MB test (with a cut-off <7 sequential months being abnormal) best predicted an abnormal MMSE (AUC 0.82; sensitivity 0.7, specificity 0.92).

**Discussion:** Our study suggests that all five attention tests are pretty equivocal in predicting an abnormal MMSE or CDR-defined dementia, with the MB and SSF performing best. The SSF with a cut-off <4 (i.e. failing a sequence of 4) out-performed the traditional WB and serial-7s, offering firstly a non-verbal attention test for patients with expressive dysphasia, and secondly, an attention test that is not reliant on pre-morbid calculation or spelling ability.

## P92

### Dem@Care: A Proposed System for the Home-Based Ambient Monitoring and Enablement of Older Adults with Dementia

Joanna Edel McHugh, Eamonn Newman, Alan Smeaton, Kate Irving

Dublin City University, Dublin, Ireland

**Introduction:** With an ageing population comes an anticipated leap in the numbers of individuals with dementia, and it is advisable both from an economic and community perspective to maintain home-based care for individuals with dementia for as long as possible. Ambient assistive and sensor technologies comprise a key contribution towards helping the person with dementia maintain independence in their community, by supporting their health, lifestyle, and safety, in an unobtrusive manner. Ambient technologies can be used to assess the status of the individual with dementia, and also to enable their independent home-based living for as long as possible.

**Methods:** Dem@Care is an FP7 funded initiative, which aims to provide multi-parametric remote monitoring and enablement for persons with dementia living in the community. We here describe the goals of Dem@Care, as well as the principles behind its design, and early identified issues with deployment.

**Results:** We report relevant guiding principles from the literature, as well as principles arising from the team's own clinical expertise. These principles include user-centred design, individualisation, involving the caregiver, and the prioritising of unobtrusive monitoring. Our goals include the successful enhancement of the quality of life of individuals with dementia, and the efficient and unobtrusive design of technological sensor-based systems in the home. We outline our plans to date to deploy the complete Dem@Care in the homes of community-dwelling older adults with dementia. An emphasis throughout is maintained on the individualised, 'toolbox' nature of the system, since we are aware that one size does not fit all for dementia.

**Discussion:** The current proposal introduces the Dem@Care project, as a system for remote management and enablement of persons with dementia. We anticipate valuable insights pertaining to dementia care arising from this multidisciplinary initiative.

## P93

### Compliance with Stroke Guidelines in a New Stroke Unit

Nathan Maher, Waheed Shah, Joanne Kitchen, Riona Mulcahy

Waterford Regional Hospital, Waterford, Ireland

**Introduction:** Stroke is associated with high morbidity and mortality which is reduced by management in specialised stroke units.<sup>1</sup> Up to date guidelines exist to optimise documentation and therapy.<sup>2</sup> This audit aimed to establish incidence of National Institute of Health Stroke Scale (NIHSS) documentation, appropriate imaging, risk factor assessment/management and optimal pharmacotherapeutic interventions in patients admitted to a new acute stroke unit (ASU). Retrospective chart review was undertaken in patients admitted to ASU from October 2011 to March 2012 inclusive.

**Methods:** Data was available on 44 patients (M = 21, F = 23, Mean age 73.5 years [27–92]). Ischaemic strokes accounted for <sup>35</sup>/<sub>44</sub> (79.5 %) of whom 3 were eligible for thrombolysis. NIHSS scores were documented on admission in only 9 (20.5 %) which included the 3 patients for thrombolysis, at 24 h in 5 (11.4 %), and at 2 weeks in 2 (4.5 %) patients. Computed tomography was performed in <sup>42</sup>/<sub>44</sub> (95.5 %) within 24 h. Aspirin was commenced in 21 ischaemic strokes and continued in 14.

**Results:** Fasting glucose was measured in <sup>35</sup>/<sub>44</sub> (79.5 %) and fasting lipids in <sup>23</sup>/<sub>44</sub> (52.3 %) within 24 h. <sup>5</sup>/<sub>44</sub> (11.4 %) had diabetes of whom two were diagnosed during admission. <sup>22</sup>/<sub>44</sub> (50 %) were on statin therapy on admission. 25 % (<sup>11</sup>/<sub>44</sub>) had elevated cholesterol. Over half (<sup>24</sup>/<sub>44</sub>) had pre-existing hypertension while 6 (13.6 %) remained hypertensive at 2 weeks. 7 (15 %) had a smoking history, 7 (15 %) had previous strokes and 4 had previous myocardial infarction. Multidisciplinary assessment were carried out in all patients, with <sup>26</sup>/<sub>44</sub> (59.1 %) assessed by speech therapy within 24 h, <sup>23</sup>/<sub>44</sub> (97.7 %) by physiotherapy within 72 h and <sup>44</sup>/<sub>44</sub> (100 %) by occupational therapy within 1 week. Mean length of stay was 18.7 days (2–109). Overall mortality rate was 11.4 %.

**Discussion:** NIHSS scores are poorly documented in patients ineligible for thrombolysis. Patients underwent imaging and initiation of anti-platelet therapy within an appropriate time-frame. Initiation of statin therapy was sub-optimal. Multidisciplinary involvement was in line with National Institute of Clinical Excellence guidelines. More stringent adherence to guidelines is recommended within the unit with appropriate education and monitoring.

#### References:

<sup>1</sup>Langhorne 2008

<sup>2</sup>National Clinical Guidelines Irish Heart Foundation 2009.

## P94

### I Don't Mind Older People, I Just Don't Want To Be Old: Attitudes Towards Age and Ageing

Maria Heffernan, Andy Cochrane

National University of Ireland Maynooth, Co Kildare, Ireland

**Introduction:** In 1993 the National Council for the Elderly republished Power's 1987 study "Attitudes of Young People to Ageing and the Elderly" as a special contribution to the European Year of Older People and Solidarity between Generations. It seems timely, in the current European Year of Active Ageing and Intergenerational Solidarity, to examine how attitudes towards ageing and older people have changed.

**Methods:** A convenience sample of young adults (n = 51; mean age 20.78), and middle aged adults (n = 48; mean age: 40.70) completed the original questionnaire developed by Powers. This included questions related to degree of contact with older persons, personal



attitudes towards older people and the ageing process, and anxiety about ageing. Additionally, respondents completed an MCQ version of Palmores Facts on Aging Quiz, and were asked to draw a sketch that represented an older person.

**Results:** The majority of respondents of both age groups had positive attitudes towards older people; consistent with other research, females were generally more positive than males. Nevertheless, respondents were ambivalent towards their own ageing. Young women in particular reported more anxiety and fear towards ageing, than in the original study. This may be related to a lack of contact with older people or media obsessions with ‘youthfulness’. The sample as a whole had poor knowledge of the facts of ageing; the respondents’ consistently underestimated older peoples cognitive and physical adaptability and capabilities, and overestimated the prevalence of dementia and numbers needing long term care. The sketches revealed implicit negative stereotyping of older people; the images depicted symbols of physical debilitation and frailty.

**Discussion:** While the findings are encouraging in terms of the positive attitudes towards older people, there is a worrying lack of intergenerational contact, and low levels of knowledge related to ageing, that may contribute to ageism.

## P95

### Responding to an Ageing Population: A Bibliometric Analysis

Andy Cochrane, Amanda Roberts

*National University of Ireland Maynooth, Co Kildare, Ireland*

**Introduction:** The proportion of older people in Ireland has been relatively low compared to other EU countries; nevertheless, the latest Census revealed that the number of older people has increased by 14 % since 2006. It could be argued that Ireland has been well placed to respond to the changing demographics due to the significant investment in gerontology research. This review assessed research publications to establish how the research base has developed since 2000, and importantly, how the research output reflects the priorities outlined in the European Roadmap for Ageing Research (Futurage).

**Methods:** Publications with at least one author affiliated to an Irish institution and published since 1999 were identified by searching SCOPUS database, (search terms: “ageing” “older people” “elderly”). The resulting documents were manually searched and excluded if not exclusively focussed on older people (i.e. >50 years old), or on an issue predominately associated with ageing.

**Results:** Over 700 documents were identified, with a considerable increase in output observed between 2000 ( $n = 17$ ) and 2011 ( $n = 145$ ). Unsurprisingly perhaps, the majority of the articles reflect the dominance of the biomedical model of ageing that has traditionally influenced research priorities and funding. Encouragingly, there is an increasing trend towards cross-disciplinary and international collaborations.

**Discussion:** The research base in Ireland has grown rapidly, albeit from a low baseline, with nearly a 9 fold increase in published research articles and reviews in 2011 compared to the year 2000. It seems likely that high profile, cross-disciplinary initiatives, such as the Irish Longitudinal Study on Ageing, have done much to establish ageing as a research priority. However, there is a need to also embrace a more holistic psychosocial perspective in both healthy ageing, and disease-focussed research to fully reflect the new vision of ageing embraced by the Futurage Roadmap.

## P96

### Test Retest and Inter-rater Reliability of Fear of Falling in Older Adults with Intellectual Disabilities Using Proxies

Sinéad Foran<sup>1</sup>, Mary McCarron<sup>2</sup>, Philip McCallion<sup>3</sup>

<sup>1</sup>*Waterford Institute of Technology, Waterford, Ireland,*

<sup>2</sup>*Trinity College, Dublin, Dublin, Ireland,* <sup>3</sup>*University of Albany, Upstate New York, USA*

**Introduction:** This study assesses test retest and inter-rater reliability of proxy reports of Fear of Falling (FOF) in older adults with intellectual disabilities (ID). There has been little prior investigation of the experience of Fear of Falling in older adults with intellectual disabilities (ID), yet falls are a concern. Valid and reliable measurement approaches are a particular challenge. Scales that have been developed to measure FOF have not been validated for use with older people with ID and are not routinely used with proxy respondents. Studies of quality of life measures have suggested that proxy respondents may not be reliable alternate assessors of subjective impressions and experiences but this has not been specifically examined for FOF.

**Methods:** 63 people comprised purposeful samples of 3 groups, people with ID ( $n = 21$ ), their nominated key workers ( $n = 21$ ) and additional support workers ( $n = 21$ ). Test re-test reliability and inter-rater reliability was assessed for a global FOF item. The degree of FOF and activity restriction due to FOF was also investigated.

**Results:** Inter-rater reliability among the different pairings of reviewers was found to be moderate to excellent with Kappa = 0.77 on ratings of the FOF item. Test retest reliability statistics for each group of reviewers for the FOF item was also found to be excellent (0.96).

**Discussion:** Reliability of assessments of FOF by proxy respondents ranged from moderate to excellent. The global item is a suitable screening measure for FOF in older adults with ID and can assist identification of individuals requiring further assessment. The findings regarding use of proxy recorded data have the potential to support expanded consideration of FOF in people with ID.

## P97

### Care Needs Assessment of NHSS Applications from People Living in the Community

Emer Ahern, Paul Cotter, Rory McGovern

*St Luke's General Hospital, Kilkenny, Ireland*

**Introduction:** The Nursing Homes Support Scheme (NHSS) is the state scheme of financial support for people who need nursing home care and was enacted in 2009. An assessment of the person's needs is a legislative requirement under the Act. There are three steps to the application process. Step 1 is an application for a care needs assessment and in the Health Service Executive (HSE) Common Summary Assessment Record (CSAR) guidance document it is written ‘this assessment will be undertaken by the multidisciplinary team (MDT).’

**Methods:** In response to this requirement, the Carlow/Kilkenny Local Placement Forum (LPF) developed a standard operating procedure (SOP) to ensure applicants receive a care needs assessment by the right persons (i.e MDT), in the right place and at the right time.



Since 2011, we designated 2 of the 28 rehab. beds as NHSS assessment beds and applicants are listed through the LPF for further in-patient MDT assessment.

In 2011, 263 applications were received, 156 approved and 53 declined funding.

We retrospectively studied the use and outcomes of this service.

**Results:** 25 patients were referred for further in-patient NHSS MDT assessment: 18 from home (H);

4 from Nursing Home (NH); 3 from Supported Housing Units (SHU). Following MDT assessment, 12 of the 18 from H returned H; 2 were transferred to SHU, 1 to NH and 3 were transferred to General Hospital (GH). Of the 4 from NH, 1 was transferred to SHU and 1 went H.

**Discussion:** 3 were transferred from home to hospital suggesting reversible but unrecognised pathology which had provoked the NHSS application. We believe, without the local SOP and in-patient MDT assessment service, most of these applicants would have been approved for NH care and other options, including community services and supported housing units, would not have been considered.

## P98

### Decompressive Hemicraniectomy in a 67 Year Old Gentleman with Malignant Hemispheric Infarction

AH Lavan<sup>1</sup>, SKK Lee<sup>1</sup>, I Khadijuh<sup>1</sup>, P Brennan<sup>2</sup>, M Javanpur<sup>3</sup>, DJP Williams<sup>1</sup>, A Moore<sup>1</sup>

<sup>1</sup>Department of Geriatric and Stroke Medicine, Beaumont Hospital, Dublin, Ireland, <sup>2</sup>Department of Radiology, Beaumont Hospital, Dublin, Ireland, <sup>3</sup>Department of Neurosurgery, Beaumont Hospital, Dublin, Ireland, <sup>4</sup>Royal College of Surgeons in Ireland, Dublin, Ireland

**Introduction:** Prompt identification of patients at risk of developing malignant hemispheric infarction is crucial for patient selection for decompressive hemicraniectomy (DH). DH undertaken within 48 h of stroke onset in patients aged less than 60 years reduces mortality and increases favourable outcomes in malignant hemispheric infarction. However elderly patients are often underrepresented in stroke trials which has led to an age limit of 60 years being used for guidelines regarding hemicraniectomy. We present the case of a 67-year old patient treated with a right DH.

**Methods:** A 67 year old gentleman, with a history of untreated atrial fibrillation, hypertension and diabetes mellitus, presented with a right sided total anterior circulation stroke syndrome.

**Results:** Initial Glasgow Coma Scale (GCS) was  $14/15$  and BP was  $170/94$ . CT brain confirmed a right middle cerebral artery infarction with haemorrhagic transformation. ECG confirmed Atrial fibrillation supporting a cardio-embolic cause. GCS further deteriorated to  $12/15$  48 h post symptom onset. A CT brain was repeated which confirmed the previous features with the further development of a mass effect in keeping with a malignant middle cerebral artery (MCA) syndrome. DH was performed 54 h post original symptom onset. The patient underwent intensive rehabilitation and was discharged 7 weeks post symptom onset with a modified Rankin Score (mRS) of  $5/6$ .

**Discussion:** DH was associated with survival but not early evidence of functional recovery in our 67 year old gentleman. The on-going trial DESTINY-II, is currently evaluating the efficacy of DH in older patients which will hopefully improve patient selection for this procedure in this group of patients.

## P99

### The Effects of a Pilot Exercise Programme on Walking Capacity, Function and Quality of Life in People With Parkinson's Disease

Liz O'Sullivan

Cork University Hospital, Cork, Ireland

**Introduction:** Tremor, rigidity and bradykinesia are three cardinal signs of Parkinson's Disease (PD)<sup>1</sup> Exercise may help delay progression of symptoms by maintaining function as well as reducing mortality. This study aimed to investigate the effects of a 12 week aerobic exercise class on walking capacity, functional ability and quality of life (QOL) in people with mild to moderate PD. A secondary aim of the study was to investigate the habitual physical activity levels in people with PD pre and post intervention.

**Methods:** Pilot cohort study: 12 weeks of a once-weekly circuit based aerobic exercise class.

Repeated measures taken by an independent assessor pre and post intervention. Outcome measures used were the Six Minute Walk Test (6MWT), Timed Up-and-Go test (TUG), Parkinson Disease Questionnaire-39 (PDQ-39) and the Stanford Seven Day Physical Activity Recall Questionnaire.

A convenience sample of 10 people with PD (Hoehn & Yahr Scale score 1–3) were recruited from Cork University Hospital.

**Results:** 6MWT walking distance significantly improved by 22 % ( $p < 0.001$ ). TUG test times showed a statistically significant improvement of 26 % ( $p < 0.001$ ). Physical activity questionnaire results showed a trend towards increased activity post intervention with up to 17 more minutes of physical activity daily.

**Discussion:** The results of this pilot study were encouraging and highlighted the capacity for physical improvement in PD. Promotion of physical activity has vital importance for people with long-term conditions such as PD. Developing appropriate exercise interventions could optimise future management and provide tangible health benefits in terms of preventing complications associated with PD.

#### Reference:

<sup>1</sup> Stewart EH, Crosbie JH (2009) Aerobic fitness in people with Parkinson's disease: a review of the evidence. *Physiotherapy Ireland* 30(2):21–26.

## P100

### A Multidisciplinary Community Rehabilitation Team in North Cork: An Overview of the First Two Years

Isibéal McCoy, Mary Henderson, Pauline McSweeney, Louise McKenna, Ann McCarthy, Bernie Quinn

HSE South, North Cork, Ireland

**Introduction:** An overview of a community rehabilitation team. The team consists of a physiotherapist, occupational therapist, public health nurse, speech and language therapist and two rehabilitation assistants. The team see patients in both domiciliary and outpatient rehabilitation settings. The poster will outline how the community rehabilitation team service has developed and present statistics from its first 2 years of operation.

**Methods:** Data was collected on all patients who used the service for example; demographic details, diagnosis, referral source, length of rehabilitation, onward referral to other services.

**Results:** Data has been collated and analysed. For example there were 217 referrals to the service from January 2010 to December 2011. 42 of these had CVA's, 70 had fractures.

**Discussion:** This poster aims to outline the service offered by the multidisciplinary team detailing the number, type and age profile of patients availing of the service and the development of the service and links with other services. The poster also aims to outline future plans for service developments.

#### References:

Fisher R, Gaynor M, Kerr M, Langhorne P, Anderson C, Bautx-Holter E, Indredavik B, Mayo N, Power M, Rogers H, Morten Ronning O, Widen Holmqvist L, Wolfe C, Walker M (2011) A Consensus on stroke: early supported discharge. *Stroke* 42:1392–1397.

## P101

### Poor Performance of a Readmission Risk Prediction Model in an Older UK Population: An Observational Study

Paul Cotter<sup>1</sup>, Vikas Bhalla<sup>2</sup>, Stephen Wallis<sup>2</sup>, Richard Biram<sup>2</sup>

<sup>1</sup>St Lukes Hospital, Kilkenny, Ireland, <sup>2</sup>Addenbrookes Hospital, Cambridge, UK

**Introduction:** Readmissions are common, expensive and potentially preventable. To target prevention, those likely to be readmitted must be identified. The LACE index predicts readmissions in a younger Canadian population and is in clinical use internationally. In this study the LACE index was investigated in an older UK population.

**Methods:** An observational retrospective cohort study was performed. Randomly selected alive-discharge episodes from the Department of Medicine for the Elderly to the local Primary Care Team were reviewed. Length of stay, Acuity of admission, Charlson comorbidity index and ED visits (LACE) score in the previous 6 months was calculated for each patient. The LACE index as a diagnostic test for subsequent readmission or death was assessed using receiver operator characteristic (ROC) curves. Logistic regression was used to test the individual components of the LACE index. The logistic regression model was compared with the LACE, and validated in a separate population.

**Results:** 507 patients were included with a mean (SD) age of 85 (6.5) years; 90 were readmitted (17.8 %) and 23 died (4.5 %) within 30 days. The median LACE score of those readmitted compared to those who were not was 12.5 versus 12 ( $p = 0.13$ ). The LACE index was only a fair predictor of both readmissions and death with a c-statistic of 0.55 and 0.70 respectively. Only emergency department visits was an independent predictor of readmission, with a c-statistic of 0.61 for readmission using the regression model. In a validation cohort of 507 cases, the c-statistic of the regression model was 0.57.

**Discussion:** The LACE index is a poor tool at predicting 30-day readmission in an older UK inpatient population. It lacks the necessary sophistication to differentiate the complex factors which cause unplanned readmissions in this population. The absence of a simple predictive model for readmission inhibits attempts to prevent readmissions.

## P102

### One Year Audit of Prevalence and Management of Atrial Fibrillation in a Stroke Population

Andrew Crowe, Imelda Noone, Ian Callanan, Diarmuid O'Shea

St. Vincent's University Hospital, Dublin, Ireland

**Introduction:** Atrial fibrillation (AF) is a major risk factor for cardio-embolic stroke and increases in prevalence with age from 0.5 % at 40–50 years to 5–15 % at 80 years.<sup>1</sup> Despite the efficacy of warfarin in reducing the risk of stroke by 67 % in patients with AF, Anticoagulation Therapy (ACT) remains underused. In the North Dublin Population Stroke Study (NDPSS) only 25 % of patients with known AF were on ACT at the time of their stroke.<sup>2</sup> We decided to audit the proportion of ischaemic stroke survivors in our service who were anticoagulated on discharge.

**Methods:** Data was analysed retrospectively on 338 acute strokes presenting to our University Hospital over a 1 year period using a self devised audit tool and then entered into a software program for data analysis (Sphinx). Variables included demographic details, type of stroke, length of stay and outcome.

**Results:** of 338 acute strokes in 2011, 62 (18 %) had AF (73 % existing, 27 % new), 51 % were female and the majority (74 %) were >80 years. Of the 62 (18 %) patients were in AF, 20 were unsuitable for AC (18 died, 2 haemorrhagic strokes) leaving 42 potential candidates for ACT.

Overall 36 (86 %) patients were anticoagulated on discharge. Indications for not anticoagulating 6 (14 %) patients included gastrointestinal bleed, palliative care, patient refusal and discharge to another institution prior to commencement (1 patient each) and frailty (2 patients).

**Discussion:** Our audit reveals a high proportion (86 %) of stroke survivors with AF who are discharged on anticoagulation. This was facilitated through a more accurate assessment and discussion of the risks and benefits of ACT. This, coupled with the involvement of patients, their families, general practitioners, nursing home staff and nurse led clinics, in the anticoagulation regimen of the patient helped optimise safe therapeutic dosing and compliance.

#### References:

<sup>1</sup>Stewart S, Hart CL, Hole DJ, McMurray JJ (2001) Population prevalence, incidence, and predictors of atrial fibrillation in the Renfrew/Paisley study. *Heart* 86:516–21.

## P103

### Hypercalciuria as an Overt Cause of Renal Stones and Covert Cause of Osteoporosis

Najia Siddique, Susan Mcanallen, James Sweeney, Georgina Steen, JB Walsh, MC Casey

Bone Health Services, Mercers Institute for Research on Ageing, St. James's Hospital, Dublin, Ireland

**Introduction:** Hypercalciuria is prevalent in 5–10 % of general population but it remains frequently undetected. It is the most common identifiable cause of calcium kidney stone disease. Recent studies have shown that it may also exhibit reduced bone mineral density (BMD). We therefore conducted this study to investigate the

prevalence of hypercalciuria, renal stones, and its correlation with BMD in our osteoporotic population.

**Methods:** A cohort of 268 new patients presenting to us with severe osteoporosis was analysed. These were divided into two groups i.e hypercalciurics versus normocalciurics. The cut off value for hypercalciuria was defined as per international standards i.e  $\geq 7.5/\geq 6.25$  mmol/24 h for male/female respectively. Baseline characteristics and lab parameters were compared among 2 groups including bone biochemistry and bone markers i.e CTX (bone resorption) OC, PINP (bone formation). BMD at spine/hip and presence of vertebral/extra vertebral fractures was also looked at. Wilcoxon rank sum and parametric *t* test were applied.

**Results:** 16.4 % of patients were hypercalciuric and 6.8 % of them had radiological evidence of nephrolithiasis. There was no significant difference in age, sex, fracture prevalence, diuretic or calcium/vitamin D usage between 2 groups. S.ca, PO4+, PTH, 25(OH)D was same in both groups.  $^{36}/_{44}$  hypercalciurics were on anti-resorptive agents therefore no significant differences were observed in bone markers between both groups. A significantly lower BMD spine in hypercalciurics  $0.75 \pm 0.13$  was observed in comparison with normocalciurics  $0.907 \pm 0.16$  P 0.00

**Discussion:** This data demonstrates that good figures of osteoporotic patients have hypercalciuria with significantly high prevalence of renal stones. It also establishes that hypercalciurics tend to have lower BMD at spine irrespective of their calcium/vitamin D status and diuretic usage. We therefore conclude that timely management of hypercalciuria avoids renal stones and also averts progression of osteoporosis. It also explains the need for further studies to understand this disorder clearly.

#### P104

### High Prevalence of Cerebral Amyloid Angiopathy (CAA) at Post-mortem Examination in Elderly Stroke Service Patients

Morgan Crowe, Imelda Noone, Diarmuid O'Shea, Michael Farrell

St. Vincent's University Hospital, Dublin, Ireland

**Introduction:** Sporadic cerebral amyloid angiopathy (CAA) is associated with a spectrum of clinical disorders including cerebral haemorrhage; rapidly progressive cognitive and neurological decline, transient focal neurological episodes and dementia. Definitive diagnosis of CAA depends on neuro-pathologic demonstration of vascular amyloid.

**Methods:** We reviewed the post-mortem neuro-pathologic findings in 8 patients (mean age 81 years, range 67–95) of a total of 48 inpatients who died in 2011 on the stroke service. Representative brain tissue blocks, stained with haematoxylin & eosin and immunostained with anti- $\beta$ A4 and tau were microscopically examined for vascular deposition of  $\beta$ A4 as well as plaque and tangle density.

**Results:** In 5 patients the acute neurological event was due to intracranial haemorrhage (intra-cerebral, subarachnoid, subdural, alone or in combination). In one other patient intra-cerebral haemorrhage complicated thrombolysis for an acute cerebral infarct. Of the 6 patients, 4 had CAA in parenchymal, meningeal and perivascular distributions. Of the remaining 2 patients with acute cerebral infarcts, one had capillary CA. Although  $^{5}/_{8}$  (62 %) had CAA, none had a high probability of Alzheimer Disease (AD) based on the ABC scores for AD neuro-pathologic change<sup>1</sup>.

**Discussion:** The high prevalence of CAA (62 %) in this study is consistent with other population based autopsy studies (20–60 %) in the elderly.<sup>2</sup> However the role of CAA in the pathogenesis of acute neurological events in our patients requires further evaluation.

#### References:

- <sup>1</sup> Montine TJ et al (2012) National Institute on Aging-Alzheimer's Association guidelines for the neuropathologic assessment of Alzheimer's disease: a practical approach. *Acta Neuropathol* 123:1–11
- <sup>2</sup> Charidimou et al (2012) Sporadic cerebral amyloid angiopathy revisited: recent insights into pathophysiology and clinical spectrum. *J Neurol Neurosurg Psychiatry* 83:124–137.

#### P105

### A New Look at the Socio-economic Health Gradient: Objective and Subjective Measures of Cardiovascular Health

Irene Mosca, Bláithín Ní Bhuachalla, Rose-Anne Kenny

TILDA, Trinity College Dublin, Dublin, Ireland

**Introduction:** The relationship between socioeconomic status and health has been studied extensively in the medical and economics literature, with self rated measures of health typically utilized. Gradients in mortality, morbidity and poor health by socioeconomic status have been observed. However, there are concerns that differences in (self-reported) health are measured with bias if they vary with conceptions of what 'good health' means and with socioeconomic status.

**Methods:** Data from the first wave (2009/2011) of The Irish Longitudinal Study on Ageing (TILDA) was used.<sup>1</sup> We focused on 3 cardiovascular diseases (CVDs), hypertension, hypercholesterolaemia and atrial fibrillation (AF) as we have both self-reported and objective measures of these conditions for same respondents. All were analysed separately using logistic and linear regressions confounding for usual variables but also co-existent cardiovascular diseases and diabetes. Two measures of socioeconomic gradient were used: education and wealth. Research questions: do we observe a socioeconomic gradient in health for these diseases when we use self-reported measures? Do results hold when we use objective measures of the same condition?

**Results:** for hypertension we found no evidence of socioeconomic gradient when using self-reported measure but evidence when using objective measure. The more educated and wealthier were significantly less likely to be objectively hypertensive ( $p = < 0.05$ ). Wealthier individuals were more likely to report having been diagnosed by the doctor with high cholesterol. Using continuous LDL-cholesterol (C) and HDL-C as the objective measure, the higher educated had higher HDL ( $p < 0.01$ ) but not lower LDL. The higher educated were more likely to be aware of having an abnormal heart rhythm but objectively were less likely to have AF on electrocardiogram ( $p < 0.05$ ).

**Discussion:** We found substantial differences in socioeconomic gradient when looking at self-reported versus objectively measured CVDs.

#### Reference:

- <sup>1</sup>Fifty Plus in Ireland 2011: First results from the Irish Longitudinal Study on Ageing (TILDA). 2011 May. Available from: <http://www.tcd.ie/tilda/publications>.

## P106

## Quality of Life (QOL) Post Stroke: A Case Series

Zareena Abidin, Niamh Dixon, Frances McCarthy, Renata Katz, Dermot Power

*St Mary's Hospital, Phoenix Park, Dublin, Ireland*

**Introduction:** There is growing interest not just in physical recovery from stroke but in quality of life following the incident. In Ireland, no study to date has focussed on this area. We now report a case series describing the characteristics and quality of life of 5 patients at a stroke rehabilitation unit in March 2012, assessed by standardised scales, both self-administered and objectively completed by staff.

**Methods:** Physical disability was assessed using Barthel Index, modified Rankin scale and Scandinavian Stroke scale. Patients completed 5 self-rated questionnaires; Hamilton Rating Scale for Depression (HAMD), Stroke Specific Quality of Life Scale (SS-QOL), Stroke adapted Sickness Impact Profile (SA-SIP), Frenchay Activities Index, and RAND 36-Item Health Survey. Two members of the stroke rehabilitation team also completed the questionnaires based on their impression of the patients.

**Results:** 5 patients (2 male, mean age 75.4 years) were assessed with mean Barthel of 10.4 and mean Rankin 3.6. Mean self-assessed HAMD score was 11 (range 18–5), with a score >19 indicating severe depression. By contrast, mean staff-assessed score was 20.2 (range 17–33). Similarly staff rated patients at a worse level on the SS-QOL compared to the results of the self-rated SS-QOL.

**Discussion:** In general there was consistency between staff and patients on level of physical disability as assessed by the rating scales. However there was a significant discrepancy between patients and staff with characterisation of quality of life and mood. While undertaking the study we identified practical and methodological challenges for stroke-patients in completing self rated questionnaires due to visual, cognitive, and physical impairments. In the absence of practical self-rated QOL measures, we risk setting unrealistic rehabilitation targets leading to patient disappointment on the one hand and work dissatisfaction among the rehabilitation team on the other.

## P107

## Physiotherapy in Dermatomyositis: A Single-Case Study

Miriam McDonnell

*St. James's Hospital, Dublin, Dublin 8, Ireland*

**Introduction:** Dermatomyositis is an idiopathic inflammatory myopathy, characterised by proximal muscle weakness, fatigue and reduced aerobic fitness.<sup>1</sup> Although the condition is progressive, symptoms can be improved with rehabilitation. This study aimed to demonstrate the outcome of a 65 year old female who presented to in-patient physiotherapy with Dermatomyositis.

**Methods:** A single-case study of a patient diagnosed with Dermatomyositis was completed. Joint range of motion (ROM), muscle power (Oxford Scale), balance and functional ability were the outcomes used. Treatment included range of motion (ROM), muscle strengthening, balance re-education, gait re-education, transfer practice and aerobic training.

**Results:** At the patient's most dependent level: shoulder ROM was ~35° abduction and flexion, power  $2/5$  bilaterally; hip ROM

was ~45° flexion, power  $2/5$  bilaterally; power was  $3/5$  at the elbow and knee for flexion and extension bilaterally, with full ROM; ROM and power at all other joints was within normal limits; the patient required maximal assistance of two people to stand, complete bed transfers and mobilise with a zimmer frame.

At discharge: shoulder flexion ROM was ~100° bilaterally; hip flexion ROM was ~90° bilaterally; hip, shoulder, elbow and knee power was  $4/5$  bilaterally; ROM and power at all other joints remained within normal limits; the patient was able to stand and mobilise with a walking stick independently, complete bed transfers with assistance of one person, climb a stairwell with supervision and scored  $53/56$  on the Berg Balance Scale.

**Discussion:** Daily physiotherapy enabled the patient to complete activities of daily living independently by improving muscle strength, aerobic and functional capacity, as found in previous studies.<sup>1</sup> This allowed the patient to be discharged home with minimal supports and onward referral for out-patient physiotherapy.

# Reference:

<sup>1</sup>Habers GEA, Takken T (2011) Safety and efficacy of exercise training in patients with an idiopathic inflammatory myopathy: a systematic review. *Rheumatology* 50:2113–2124

## P108

## Self-Rated Vision and Cognitive Function in the Irish Population

Annalisa Setti<sup>1</sup>, Bláithín Ni Bhuachalla<sup>2</sup>, George M. Savva<sup>1</sup>, Rose Anne Kenny<sup>1</sup>

<sup>1</sup>The Irish Longitudinal Study on Ageing (TILDA), Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland

**Introduction:** Visual impairment is recognized worldwide as a burden with high health, psychological and economic costs. Using data from TILDA, the Irish Longitudinal Study on Ageing, we aimed to extract the prevalence of visual impairment and eye related diseases in the Irish population. A recent study found baseline poor vision to be associated with development of dementia 8–9 years later (Rogers & Langa, 2010), we investigated the relationship between vision and cognition in order to characterize those in population at possible risk of cognitive decline. We focused on people rating their vision as 'Fair' because while having suboptimal vision their deficit may have an avoidable cause.

**Methods:** for the sampling method in TILDA see report. We utilize the question 'Is your eyesight (using glasses or contact lens.): Excellent/Very Good/Good/Fair/Poor/Registered Blind. Linear regression is used to test the effect of poorer vision on cognitive status (Mini Mental State Examination, (MMSE)).

**Results:** 9 % of the population report to have Fair vision (N = 685). Among them 67 % do not self report eye disease and therefore may have uncorrected refractive error or undiagnosed eye pathology About 22 % of people rating their vision as 'Fair' report having cataract, 6 % glaucoma and 4 % age-related macular degeneration (AMD). People with Fair vision are more likely to have lower MMSE score (model adjusted for age, sex, hypertension, diabetes and stroke history, smoking status, polypharmacy, hearing deficits) [coeff = -0.555, p < 0.001].

**Discussion:** Refractive error, cataract and glaucoma are treatable causes of visual impairment that can be addressed by visiting an ophthalmologist or surgery. Considering untreated poor vision is associated with cognitive decline it should be a priority to investigate



patient reports of poor vision and treat causal conditions particularly as 34 % of sample in TILDA rate their vision as only good and are likely to transition into lower ratings of scale.

## P109

### Pilot of Integrated Care Pathway (ICP) for Hip Fracture in a Regional Hospital

Louise Brent

*University College Cork, Cork, Ireland*

**Introduction:** In WRH 400+ hip fracture patients are treated annually. Improving care and outcomes for this group of patients is the aim of the ICP. Mortality rates for hip fracture patients are 6–9 % at 1 month, 13–19 % at 3 months and 26–33 % at 12 months (Alzahrani et al., 2009) and up to 50 % of patients do not regain their pre-fracture functional status. (Wehren & Magaziner, 2003). For 2 years the multidisciplinary team have been developing a document that would incorporate the British Orthopaedic Association (Blue Book) standards for hip fracture care and streamline the hip fracture patient's journey through the orthopaedic service.

**Methods:** n = 20 hip fracture patients admitted via the fast track protocol directly to the orthopaedic wards were put on the ICP. This was a prospective audit carried out from March–May 2012.

**Results:** 75 % of patients were female and 25 % were male, average age 81:05, 95 % of patients admitted from peripheral hospitals, 10 % of patients admitted from emergency department (ED) within 4 h, 85 % had surgery within 48 h, 100 % of patients received pressure area care, 70 % received geriatrician review and were charted for secondary prevention, 90 % of patients had a falls assessment. The average length of stay was 12.3 days, the structured doctors admission recorded fracture risk (80 %), falls risk (75 %), social history (95 %) and AMTS (55 %).

**Discussion:** A second pilot to be commenced in July with amendments made to analgesia, constipation management, bone protection, aspects of nursing care.

#### References:

- Alzahrani K, Gandhi R, Davis A, Mahomed N (2010) in-hospital mortality following hip fracture care in southern Ontario. *Can J Med* 54(5):294–298
- British Orthopaedic Association (2007) The care of patients with fragility fracture. British Orthopaedic Association: September.

## P110

### A Review of the Outcome of Thrombolysis for Acute Ischaemic Stroke in a University Hospital

Imelda Noone, Serena Hatton, Ontefetse Nthlholang, Avril Beirne, Kit Mun Tan Tan, Roman Romero-Ortuno, Graham Hughes, Rachael Doyle, Diarmuid O'Shea, Morgan Crowe

*St. Vincent's University Hospital, Dublin, Ireland*

**Introduction:** Stroke is a major cause of mortality and morbidity, and thrombolysis has served as a catalyst for major changes in the management of acute ischaemic stroke. The 2010 Cardiovascular Health Policy recommends that hospitals in each region in Ireland form

Stroke Networks, where a team of Stroke Specialists providing thrombolysis (tPA) to the population served within each Network. In the last 2.5 years 733 patients were screened for tPA in our University Hospital. 42 (6 %) were suitable according to the protocol.

**Methods:** We prospectively collected data on 42 patients that were thrombolysed including time of onset of symptoms to thrombolysis, National Institute of Health Stroke Scale (NIHSS) pre and post tPA and outcome at 3 months using the modified Rankin Scale (mRS). Paired samples *t* test was used to compare pre and post scores. Correlations were carried out with the Spearman's correlation coefficient.

**Results:** 42 (6 %) patients were thrombolysed over 2.5 years. 23 (55 %) were male and the mean age was 70 years. Minimum age was 31 with 12 (28 %) patients aged ≥80.

Overall (n = 42), average time from onset of symptoms to tPA was 152 min (range 80–270 min). Mean NIHSS pre tPA was 13.4 and post tPA was 8.6. ub analysis of those ≥80 years showed average NIHSS improvement from 14.5 to 10.3 (p = 0.088). At 3 months 24 (57 %) patients had recovered to mRS of 0–2 (indicating full independence, 5 (11 %) had mRS = 3 and 8 (19 %) had mRS = 4. There was a significant direct correlation between NIHSS at baseline and mRS at 3 months (Spearman correlation coefficient p = 0.004). Overall inpatient mortality rate was 9 % (n = 4, 2 were aged ≥80).

There was one symptomatic haemorrhage and on post mortem, this patient's neuropathology was consistent with amyloid angiopathy.

**Discussion:** This audit represents the outcome for thrombolysis delivered within a stroke network in our region. On average, there was a 5-point improvement in the NIHSS (p < 0.001) with only 1 major adverse event. Acute stroke thrombolysis can be delivered safely and in accordance with internationally accepted guidelines and national protocols.

## P111

### Orthostatic Hypotension and Frailty: The Irish Longitudinal Study on Ageing

Matthew O'Connell, George Savva, Hilary Cronin, Chie Wei Fan, Rose Anne Kenny

*Trinity College Dublin, Dublin, Ireland*

**Introduction:** Frailty and orthostatic hypotension (OH) may both reflect impairments in homeostatic regulation. This analysis aimed to explore the relationship between these conditions.

**Methods:** The Irish Longitudinal Study on Ageing is a nationally representative cohort study of Irish adults aged 50 and over. This analysis included 5,941 participants who received a health assessment either in the study centres or in their homes. Participants underwent an orthostatic stress test; 2 seated blood pressure measurements followed by a single measurement on standing. OH was defined as a drop on standing of ≥20 mmHg in systolic blood pressure or ≥10 mmHg in diastolic, from the mean seated levels. Participants who reported feeling dizzy, lightheaded or unsteady on standing were classed as having 'dizziness'. Frailty was assessed using an adaptation of Fried's criteria, with participants classified as robust, pre-frail or frail, according to the presence of 0, 1–2, or ≥3 of the 5 criteria.

**Results:** 354 (6 %) participants were classed as OH and 411 (6.9 %) had dizziness on standing. 199 (3.4 %) participants were classified as frail and 1,897 (31.9 %) pre-frail. Compared to robust participants, frail participants had an increased odds of OH, Odds Ratio (95 % Confidence Intervals); 1.94 (1.17, 3.22) and dizziness, 2.48 (1.62,



3.80). Adjustment for age attenuated the relationship between OH and frailty; 1.16 (0.69, 1.98), in the age and sex adjusted model. The relationship between dizziness and frailty was not explained by adjustment for demographic or cardiovascular factors (risk factors, conditions or medications). This relationship was however attenuated by further adjustment for mental health (depression, anxiety and antidepressant use); 1.55 (0.86, 2.81).

**Discussion:** OH and dizziness may both be markers of vulnerability, but appear to reflect different aspects of frailty.

## P112

### Cognitive Ageing, Geriatrics Textbooks and Unintentional Ageism

Stephanie Robinson, Robert Briggs, Desmond O'Neill

*Centre for Ageing, Neuroscience and the Humanities, Trinity College, Dublin, Ireland*

**Introduction:** Although ageing means growth and loss at all ages, a key contributor to ageism is an over-emphasis on the losses of later life with a corresponding failure to recognise the gains of maturity such as wisdom, strategic thinking, stoicism and altruism. While understanding and combating ageism is a core part of training and practice of gerontologists and geriatricians, a persistent concern is that their discourse and dialogue may unconsciously exacerbate ageism by a focus on the 'failure model' of ageing. We hypothesised that the failure model of ageing continues to be predominant in the educational processes of geriatrics.

**Methods:** We identified a series of textbooks in Trinity College Dublin listed under "geriatric", "geriatrics" and "geriatric medicine" over a 15 year span to allow for modern gerontological insights. The search was then restricted to titles targeted at physicians and geriatricians. Each textbook was reviewed and we identified all text referring to the normal cognitive changes that occur with ageing.

**Results:** The initial search yielded 313 textbooks, 54 met the criteria and 40 had an applicable section of text. Of the 40 textbooks, 22 (55 %) created an overall negative impression of cognitive changes with ageing, 13 (32.5 %) gave a relatively negative impression and 5 (12.5 %) portrayed a balanced view. No textbook gained a rating of overall or relatively positive portrayal.

**Discussion:** Our findings support the contention that the focus of our training and teaching emphasises the decline in ageing but neglects to reflect on the cognitive gains that allow many older adults to continue to retain high levels of function. It sustains the concerns that geriatricians unwittingly contribute to ageism and points to the need for academic geriatricians to develop a more salutogenic format for expressing the mission, goals and parameters for teaching geriatrics, reflecting more thoroughly on what messages our disclosure transmits to students, patients and society.

## P113

### IV Zoledronic Acid: Indications for Its Administration and Its Tolerability Following First Dose

Niamh Maher, Aoife Qinn, Georgina Steen, Nessa Fallon, Kara Fitzgerald, Joseph Browne, Miriam Casey, JB Walsh

*St James's Hospital, Dublin, Ireland*

**Introduction:** Bisphosphonates, the current standard of care for the treatment of Osteoporosis, can be poorly absorbed from the gut, have complicated dosing regimens and can cause upper gastrointestinal (GI) irritation leading to poor compliance.

**Methods:** IV Zoledronic Acid reduces vertebral, non vertebral and clinical fractures by 77, 25 and 33 % respectively.<sup>1</sup> It is associated with significant improvement in BMD and is approved for the treatment and prevention of Gluco-corticoid induced osteoporosis. As it is an infusion, Zoledronic Acid ensures compliance over the 12-month dosing interval and bypasses the GI absorption/irritation problems associated with bisphosphonates.

**Methods:** A retrospective study of patients who have received first dose of Zoledronic Acid over 18 months was carried out. Prior to infusion, Calcium and Vitamin D levels were corrected and patients were advised to keep well hydrated 24 h pre and post infusion. Regular Paracetamol was also advised. The indications for IV Zoledronic acid and possible side effects including reduction in Calcium levels were highlighted.

**Results:** Of 292 patients who received IV Zoledronic acid, 63 (21 %) experienced side effects. The most common being: flu-like symptoms (32), lethargy (12) and headache (4). Side effects experienced were transient lasting 24–48 h. 55 (19 %) patients experienced a drop in serum Calcium below normal. Indications for IV Zoledronic Acid include gastric symptoms (including oesophagitis, reflux, Barrett's oesophagus, malabsorption, coeliac disease, dysphagia) 60 (20 %), Intolerance of oral Bisphosphonates 45 (14 %), Post PTH Therapy 50 (17 %), non compliant/responder to previous therapy, 130 (44 %), cancer 5 (2 %), unsuitable/adverse reaction to PTH, 10 (3 %)

**Discussion:** Zoledronic Acid is generally safe and well tolerated and has the potential to improve compliance with osteoporosis therapy and consequently to reduce the risk of fractures in clinical practice. Discomfort experienced from side effects were reduced by patient education and symptom relief.

**Reference:**

<sup>1</sup>(Black et al. 2007).

## P114

### Co-Morbidity and Rehabilitation

L van der Poel<sup>1</sup>, J O'Kelly<sup>2</sup>, E Dolan<sup>1</sup>, PME McCormack<sup>1</sup>

*<sup>1</sup>Connolly Hospital, Dublin, Ireland, <sup>2</sup>Royal College of Surgeons, Dublin, Ireland*

**Introduction:** A dramatic increase in the number of people over eighty is predicted over the next decade. Older people may experience a decline in function after an acute illness, and rehabilitation can play an essential role to counteracting impairment and disability. Patients referred to rehabilitation often suffer from co-morbid conditions. As these are frequently not evaluated, their importance is underestimated. The aim of our study was to determine the burden of co-morbidity in the rehabilitation setting.

**Methods:** In 2010, 194 patients were admitted to the rehabilitation ward. A retrospective chart review was performed on a random selection of 50 charts. The average age was 75 years and 46 % were male. Stroke was the most common admission diagnosis (38 %). The remainder of patients were admitted with fractures

(28 %), post amputation (6 %) and functional decline due to hospitalisation (28 %).

**Results:** 78 % of patients had 3–6 co-morbid conditions and 73 co-morbidities were documented among the 50 patients. The most common co-morbidities were hypertension: 22, cognitive impairment: 17, Diabetes Mellitus: 12, atrial fibrillation: 12, anaemia: 7, osteoporosis: 7, ulcers (leg/sacrum): 6 and COPD: 4 patients

Due to their concomitant illnesses 78 % of patients required further diagnostic tests while in the rehabilitation ward. A large number of patients (41 %) required specialist investigations (Echo, MRI, CT) with 78 % requiring laboratory investigations and 30 % had vascular imaging. Almost a third of patients needed further specialist opinion and intervention. Patients were referred to orthopaedics, surgery, haematology, cardiology, respiratory and psychiatry.

**Discussion:** In the elderly individual rehabilitation can be complicated by multiple complex co-morbidities and on-going medical investigation and treatment is often necessary. A clear understanding of these conditions and their impact on parameters such as functional outcome, discharge destination and length of stay is important to maximise rehabilitation potential.

## P115

### The Smoking Elders in a General Hospital

Afolabi Antonio, Aimy Abdullah, Cha Len Lee, Kaz Siddique

*Waterford Regional Hospital, Waterford, Ireland*

**Introduction:** The Surgeon General's warning that smoking is dangerous to health is an inscription on all cigarette packs. Despite this warning, epidemiology reveal that more than 45 million American adults still smoke, more than 8 million are living with a serious illness caused by smoking, and about 438,000 Americans die prematurely each year as a result of tobacco use. It was estimated in 2005 that 22.4 % of adults age 45–64 years and 9.1 % of adults age 65 years and older are current Smokers.

**Methods:** We conducted a Prospective study via administration of a simple one-page questionnaire to 55 inpatients on the general medical wards on patients  $\geq 75$  years. We studied how many are still smoking in this category, despite well publicised complications and personally experienced comorbidities.

**Results:**  $n = 55$ . M : F—23 : 32, Median age 83.5 years. Ex-Smokers—16 (29.1 %), Never Smokers—34 (61.8 %), Active Smokers 5 (9.1 %). All the active smokers are female. 3 patients could not give up smoking because they enjoy it, 1 person believes it keeps their weight down, 1 cannot just help not smoking. The active Smokers have smoked from between 40 and 80 pack years.

**Discussion:** Despite adequate knowledge about the effects of smoking, 9.1 % of the elderly  $>75$  years still smoke and also 100 % of them have at least 2 or more smoke-related comorbidities according to our study, with one person in particular having a diagnosis of both Chronic Obstructive Lung Disease and Lung Cancer. Surprisingly, our result is quite similar to previous study with 9.1 % in the age grade  $>75$  still smoking. The chief reason why people still smoke in this category is for enjoyment!

We also inferred that the never smokers are actually in the oldest category consistent with epidemiological facts that non smokers live longer than active smokers.

## P116

### Referrals to Day Hospital: A Retrospective Review

Sarah Cosgrave, Kathleen Fagan, Kathleen Kelly, Bernadette Murphy, Margaret Cagney, Dawn Kelly, Louise O' Callaghan, Diarmuid O' Shea

*St. Vincent's University Hospital, Dublin, Ireland*

**Introduction:** The purpose of the review was to profile the new referrals to the medicine for the elderly day hospital of a Dublin hospital and to review their multidisciplinary (MDT) input and outcomes following attendance at the day hospital. The day hospital accepts referrals from local general practitioners (GPs), in house referrals, Old Age Psychiatry and our MEDEL ED Liaison Service.

**Methods:** A review of 100 new referrals, over a 9 week period was completed.

**Results:** The most popular referral source was from GPs (88 %). The reasons for referral range from assessment of cognitive decline, unsteady gait, falls, assessment of social care needs and general review. Of the 100 patients, the majority were female (66 %). The patients reviewed had an average age of 81.6 years.

Patients seen in day hospital are discussed at a MDT meeting and plan of assessment is decided upon. All patients receive input from nursing staff and medical staff. 86 % of patients received physiotherapy input, 76 % of patients received occupational therapy input and 91 % of patients received medical social worker input. Following assessment a plan of care is decided upon with patient, family and MDT. 28 % of patients were discharged back to care of GP following assessment, with 76 % of patients leaving day hospital with referral to public health nurse for additional input.

12 % of patients were discharged to parent hospital for further rehabilitation. 64 % of patients required further input from medicine for the elderly service following first visit to day hospital.

**Discussion:** Although this review is small, it highlights the importance the day hospital has in the role of caring for our elderly population. Future plans for our day hospital include re-aligning our referral system to patients care needs with input from local GPs who refer to service, community colleagues in public health nursing, physiotherapy and occupational therapy.

## P117

### An Audit on Intravenous Canulation in a Regional Hospital Setting

Afolabi Antonio, Temilola Ajala, Hafsa Sazali

*Waterford Regional Hospital, Waterford, Ireland*

**Introduction:** Intravenous canulation is the process by which an intravenous catheter is inserted into a vein either centrally or peripherally for the purpose of administering medications and fluids. Infusion-associated septicaemia is an appreciable hazard to the more than 8 million patients who receive intravenous therapy in U.S. hospitals each year. Rigorous infection control measures are necessary if the risk of sepsis is to be reduced. Based on CDC studies and a

critical review of previously published investigations, guidelines are proposed for the prevention and management of infections caused by intravenous therapy. There are a few risks related to intravenous therapy, the most common of which are infection and phlebitis. A canula should be re-sited at the first notice of inflammation or at least every 72 h to reduce risk of phlebitis, and any catheter not used within 24 h should be reviewed as to its appropriateness. (Jackson et al. 1998).

**Methods:** We conducted a prospective study of patients  $\geq 65$  years who have been acutely, electively or chronically admitted into the geriatric ward. A simple questionnaire was administered to the patients and their case notes and drug charts were also reviewed.

**Results:** 25 patients were studied. M = 13, F = 12. Median age studied = 77. All were canulated and decanulated within 72 h according to international guidelines and none had their canulas left in place past 72 h. 3 developed bruising and extravasation, 3 developed phlebitis, only one developed cellulitis. 1 held back on admission because of fever (average of 2 additional days). Only 2 had antecubital fossa insertion, 7 inserted on either arm, the remainder on the dorsum.

0 of the dorsally placed had complications.

**Discussion:** Prolonged unnecessary canulation could contribute to in-hospital infection and may delay discharge. Proven stable site of less mobility also reduce possibility of complication.

## P118

### The Effect of Multiple Chronic Conditions on Self-Rated Health, Disability and Quality of Life Among the Older Populations of Northern Ireland and the Republic of Ireland

Mark Hanly<sup>1</sup>, Olga McDaid<sup>1</sup>, Kathryn Richardson<sup>1</sup>, Frank Kee<sup>2</sup>, Rose Anne Kenny<sup>1</sup>, George Savva<sup>1</sup>

<sup>1</sup>Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Queens University Belfast, Belfast, UK

**Introduction:** Many older people suffer from more than one chronic disease. So called ‘multi-morbidity’ complicates treatment and it is known that those with multi-morbidity have worse self-rated health (SRH), more disability and poor quality of life (QOL). Moreover previous studies have shown that these adverse health outcomes are more commonly reported in Northern Ireland (NI) than in the Republic of Ireland (ROI). We used two population representative studies to assess the prevalence and consequences of multi-morbidity in NI and ROI.

**Methods:** The Northern Ireland Health and Social Wellbeing Survey 2005 and the Survey of Lifestyle, Attitudes and Nutrition 2007 included N = 6,159 participants  $\geq 50$  years. Chronic diseases were coded into groups as ‘cardiovascular disease (CVD)’, ‘respiratory disease’, ‘diabetes’ and ‘chronic pain’. The co-occurrence of these groups was explored, and logistic regression was used to examine the effect of each combination of conditions on disability, SRH and QOL.

**Results:** 51.5 % of the sample reported none of the conditions included in our study, and 29.1 % reported only chronic pain. Each chronic condition was associated with each of the others. Those with more chronic conditions more commonly reported disability, poor SRH and poor QOL. CVD, respiratory disease, diabetes and chronic pain each had a significant effect on each outcome, however any positive interactions between conditions were small and were not statistically significant. In multivariate analysis, participants from NI remained three times as likely to report disability as those from ROI.

**Discussion:** Around 20 % of the population of Ireland aged 50 and over reported a chronic condition from more than one of the groups included in our study. Those with multi-morbidity reported worse health outcomes; however this effect arises simply through the combined effects of each condition, not a synergistic ‘multi-morbidity’ effect. Chronic disease does not explain the difference in disability rates between NI and ROI.

## P119

### Change of Ambulatory Blood Pressure in a Primary Care Setting

Lelane van der poel<sup>1</sup>, E Dolan<sup>1</sup>, J Duggan<sup>2</sup>

<sup>1</sup>Connolly Hospital, Dublin, Ireland, <sup>2</sup>Mater Misericordiae University Hospital, Dublin, Ireland

**Introduction:** Ambulatory blood pressure measurement (ABPM) is being used increasingly in clinical practice and it provides useful information in the diagnosis and management of hypertension. ABPM has proven to be a superior predictor of cardiovascular risk when compared to clinic blood pressure. The recent NICE guidelines endorse its use in the early management of hypertension. We established a primary care network some years ago to increase access to ABPM. We analysed the database to ascertain how ABPM can best be utilised in the primary care setting.

**Methods:** In a primary care setting, 3,978 patients underwent ABPM monitoring, and of these only 390 patients underwent follow up ABPM within a period of 2 years. There were 150 males with a mean age of 66 years. Blood pressure was calculated as an average day (D) and night (N) time reading. In the male  $>65$  groups (N = 74), the readings were: ABPM1 D<sup>149</sup>/<sub>78</sub>, N<sup>134</sup>/<sub>68</sub> and ABPM2 D<sup>143</sup>/<sub>74</sub>, N<sup>130</sup>/<sub>65</sub>. In the female  $>65$  group (N = 150) the readings were: D<sup>148</sup>/<sub>74</sub>, N<sup>130</sup>/<sub>62</sub> and ABPM2 D<sup>145</sup>/<sub>72</sub>, N<sup>129</sup>/<sub>60</sub>. In the male  $<65$  group (N = 76) the readings were: ABPM1 D<sup>148</sup>/<sub>88</sub>, N<sup>127</sup>/<sub>69</sub> and ABPM2 D<sup>140</sup>/<sub>82</sub>, N<sup>121</sup>/<sub>69</sub>. In the female  $<65$  group the readings were: ABPM1 D<sup>144</sup>/<sub>84</sub>, N<sup>124</sup>/<sub>68</sub> and ABPM2 D<sup>141</sup>/<sub>83</sub> and N<sup>121</sup>/<sub>67</sub>. There was a notable reduction in blood pressure across all groups with the exception of night time blood pressure in females over 65 years old.

**Discussion:** While access to ABPM is improving, less than 10 % had follow up monitoring. Blood pressure control is most challenging in the elderly and although not part of the NICE guidelines, follow-up ambulatory measurements may be important to monitor treatment response.

## P120

### Prescription of Central Nervous System Agents in an Elderly Hospital Population

ÓM Dunne, OC Sheehan, AH Lavan, C Donegan, A Moore, DJP Williams

Department of Geriatric Medicine, Beaumont Hospital, Dublin, Ireland

**Introduction:** Sensitivity of the central nervous system (CNS) to agents that affect neurological function increases with age. This results in increased vulnerability of the elderly to adverse drug events (ADEs). Beer’s Criteria and the STOPP/START tool identify

potentially inappropriate medications (PIMs) relating to the CNS in the elderly.

**Methods:** Prescribing practices on four wards were reviewed. Use of CNS agents, defined as prescription of hypnotics/sedatives, antidepressants, or anti-psychotics was analysed. Prescriptions were compared to Beer's Criteria and the STOPP/START tool to assess prescribing prevalence of PIMs. The relationship between gender, length of stay (LOS) and medical versus surgical admission and use of CNS agents was analysed.

**Results:** 133 patients were studied (49.6 % male, 52.6 % medical). 99 (74.4 %) were >65 years with 62 (46.6 %) aged >80 years. Average LOS was 42.0 days (IQR 5–53).

10.2 % ( $^{193}_{/1,899}$ ) of prescribed items were defined as CNS agents. Hypnotics/sedatives were prescribed in 42.8 % of in-patients, anti-psychotics in 24.8 %, and antidepressants in 31.6 %. 60.2 % patients were prescribed one or more CNS agent. Updated Beer's Criteria 2012 recommend 74.1 % of the prescribed CNS agents in this study be avoided in the elderly population. 9.2 % ( $^{172}_{/1,899}$ ) of prescription items were highlighted for review under CNS and psychotropic section of STOPP/START tool. LOS was longer if the patient was on a CNS agent (55 vs. 22.4 days,  $p = 0.001$ ). Use of an antidepressant was associated with a longer LOS (60.5 vs. 33.5 days,  $p = 0.01$ ).

There was a trend towards increased usage of CNS agents in female patients ( $p = 0.09$ ). Medical patients (59.8 vs. 41.3 % surgical patients,  $p = 0.08$ ) were more likely to be prescribed a CNS agent.

**Discussion:** There are high usage rates of CNS agents in our patient population. Prescription of a CNS agent correlates with increased LOS. Caution in prescribing habits relating to CNS agents is needed.

## P121

### Using Structural Equation Modelling to Detect Measurement Invariance in a Measure of Frailty

Bellinda King-Kallimanis, Rose Anne Kenny, George Savva

*The Irish Longitudinal Study on Ageing, Trinity College Dublin, Dublin, Ireland*

**Introduction:** The measurement of the frailty syndrome in older people is controversial. Using data from the Survey of Health, Ageing and Retirement in Europe (SHARE) and The Irish Longitudinal Study on Ageing (TILDA) we explore the measurement properties of frailty with the goal of optimising frailty assessment according to Fried's phenotype definition.

**Methods:** Data are from SHARE ( $n = 26,486$ ) and TILDA ( $n = 5,352$ ), which are both population based studies of community dwelling adults  $\geq 50$  years. We examine whether Fried's definition can be conceptualised as a single underlying latent variable in both TILDA and SHARE, and test the assumption of measurement invariance across the 11 countries included in the first wave of SHARE. We use confirmatory factor analysis (CFA) to assess our measurement model, and multi-group CFA to assess measurement invariance in SHARE.

**Results:** A single latent variable model fit the SHARE data well (Adjusted  $\chi^2$  (48) = 76.71,  $p = 0.005$ , RMSEA = 0.016), with the same factor pattern in all countries suggesting that a single latent factor model for frailty is appropriate. The inclusion of equality constraints on the factor loadings and thresholds, led to significant model deterioration (Adjusted  $\chi^2$  diff(33) = 183.63,  $p < 0.001$ ). Many equality constraints for Spain and several of those associated with Greece, Austria and Germany were non-tenable, violating the assumption of measurement invariance. After accounting for

non-tenable equality constraints the model had satisfactory fit (Adjusted  $\chi^2$  (48) = 125.79,  $p = 0.0004$ , RMSEA = 0.017). Finally, in the TILDA data, the single latent variable model fit the data well (Adjusted  $\chi^2$  (4) = 2.34,  $p = 0.674$ , RMSEA = 0.000).

**Discussion:** In conclusion, while a single latent variable model for the Fried frailty phenotype is tenable, the factor loadings and thresholds are not invariant across countries, suggesting that direct comparisons of the prevalence of frailty across countries may not be appropriate.

## P122

### A Retrospective Review of the Effectiveness of the Berg Balance Scale in Parkinson's Disease Patients with Varying Degrees of Impairment

Christina Shannon<sup>1</sup>, Philomena Fogarty<sup>1</sup>, Riona Mulcahy<sup>2</sup>

<sup>1</sup>Waterford Physiotherapy Services, Waterford, Ireland, <sup>2</sup>Waterford Regional Hospital, Waterford, Ireland

**Introduction:** Balance impairment is a major problem associated with Parkinson's disease (PD), often leading to falls, reduced mobility and reduced functional independence. Frequent assessment and physiotherapy intervention in PD patients can help improve postural stability, gait characteristics, strength and aerobic capacity. This can reduce falls risk and improve overall quality of life. To achieve these improvements, a physiotherapy- led Parkinson's Disease Exercise Class (PDEC) with multidisciplinary input was provided by a Community Physiotherapy Service. The efficacy of the PDEC in reducing falls risk was assessed and the need for additional outcome measures for higher scoring patients was identified.

**Methods:** A total of 28 patients diagnosed with PD attended the PDEC over a 4 year period. The functional balance of each patient was assessed prior to and on completion of the class using the Berg Balance Scale (BBS). A retrospective review of the effectiveness of the PDEC was carried out using paired  $t$  tests on the pre- and post-class BBS scores.

**Results:** The improvement in BBS score (mean = 3.3,  $n = 23$ ) was statistically significant ( $P < 0.001$ ). Improvement was greater in patients with an initial BBS score  $< 50$  (mean = 5.7,  $n = 9$ ), equating to a mean estimated reduction in falls risk of between 34.7 and 46.2 %. Those with a higher initial BBS score of  $> 50$  showed markedly less recordable improvement (mean = 1.8,  $n = 14$ ). Improvement in BBS score was found to be highly negatively correlated to initial BBS score ( $R^2 = 0.80$ ).

**Discussion:** The PDEC was found to markedly improve patient postural stability and reduce falls risk, particularly where the patient had a relatively low initial BBS score. However, given the ceiling effect of the BBS and the lack of reactive balance assessment, additional outcome measures will be implemented to ensure the most appropriate and efficient physiotherapy intervention for PD patients.

## P123

### Hip Fracture Risks and Outcomes in a Nursing Home Population

S Rafferty, C Tiernan, M Al Saeed, PME McCormack, E Dolan, S Kennelly



Connolly Hospital, Dublin, Ireland

**Introduction:** Poor prescribing rates of bone protection, increased falls risk and poorer outcomes post hip fracture have been documented in previous studies of nursing home residents. We evaluated risk factors, morbidity and mortality outcomes and prescribing patterns in nursing home residents admitted with hip fractures.

**Methods:** Hospital in-patient enquiry (HIPE) data for hip fractures in 2010/2011 was examined. Retrospective chart review conducted on nursing homes patients admitted with hip fracture. Follow up data obtained through liaison with nursing home post discharge.

**Results:** 61 (23 %) of total hip fractures (n = 262) presented from nursing homes. 59 records available for evaluation; mean age 84 years (range 61–99); 78 % (n = 46) female; mean length of stay 9 days (1–60). 81 % (n = 48) had a history of dementia, 31 % (n = 18) known osteoporosis, and 29 % (n = 17) previous fracture history. Falls history available for 71 % (n = 42); 79 % of these (n = 33) had a history of falls in the preceding 6 months. 20 % (n = 12) were on a Bisphosphonate and 39 % (n = 23) on calcium/vitamin D supplement prior to fracture. At presentation 39 % (n = 23) were on an antipsychotic and 32 % (n = 19) benzodiazepines, with 19 % (n = 11) on both. 3 patients died in hospital. 47 % (n = 27) developed post operative delirium; 33 % (n = 19) developed infection. 1 patient went to rehabilitation ward. Post discharge information available on 68 % of patients (n = 38). On return to the nursing home, 50 % of these (n = 19) had suffered a major deterioration in their ambulatory status, 29 % (n = 11) moderate deterioration and 21 % (n = 8) were at baseline. 20 % (n = 12) of total patients died within 3 months. 3 patients commenced calcium/vitamin D and 6 bisphosphonates post fracture.

**Discussion:** Our study reflects a high level of morbidity and decline in functional status associated with hip fractures. Bone protection prescribing rates were poor both pre and post fracture. Safe prescribing patterns are key in preventing hip fractures in this frail population.

## P124

### Establishing a New Geriatric Teaching Programme for Undergraduate Medical Students

ÓM Dunne, C McGreevy, OC Sheehan, DC Gopinathan, A Moore, C Donegan, NG McElvaney, DJP Williams

Royal College of Surgeons of Ireland/Beaumont Hospital, Dublin, Ireland

**Introduction:** The Department of Geriatric and Stroke Medicine in our hospital supports undergraduate clinical teaching and has strong links with the other university-affiliated teaching hospitals. We recently reconfigured our clinical curriculum in geriatric medicine with the aim of pursuit of excellence in education of undergraduate students. Our programme aims to develop the key knowledge, skills, attitudes and behaviours which would be expected of all graduates and forms the basis for developing a future interest in the speciality of geriatric and stroke medicine.

**Methods:** The programme is comprised of a 1-week didactic lecture series delivered by local and visiting geriatricians, psychiatrists of old age and allied health professionals. Students also participate in a two-week small group clinical rotation in Elderly Care. The clinical rotation is delivered in a structured manner with dedicated teaching components. Teaching modalities include formal lectures, teaching ward rounds, small group tutorials, case-based problem solving

exercises, and practical sessions with multidisciplinary team members in an affiliated stroke rehabilitation unit.

Learning outcomes for time spent with multidisciplinary team members, incorporating speech and language therapists, occupational therapists, physiotherapists and social workers, included appreciation of inter-disciplinary work, impact of social history from admission through to discharge and importance of supporting communication.

**Results:** Feedback questionnaires were distributed to the students. 74.85 % of students rated the teaching components as “excellent” or “very good”. Student comments highlighted their enjoyment with the increased level of involvement with the clinical team and their exposure to the multidisciplinary team approach to patient care.

**Discussion:** Our experience with this programme has demonstrated the feasibility of aligning structured teaching components with a clinical rotation and delivering multidisciplinary teaching in a clinical setting. Increasing student interaction with the clinical team and their level of involvement with all aspects of patient care has met with positive reviews from the students.

## P125

### Technology Research in Clinical Setting: An Ethnographic Study of the Technology Research for Independent Living (TRIL) Clinic in St. James's Hospital, Dublin

Chiara Garattini<sup>1</sup>, Marie Bay Brøndum<sup>2</sup>, Ting Ting Shum<sup>1</sup>, Flip van den Berg<sup>1</sup>, Rose Anne Kenny<sup>3</sup>

<sup>1</sup>Technology Research for Independent Living (TRIL)centre, University College Dublin, Dublin, Ireland, <sup>2</sup>Copenhagen City Council, Copenhagen, Denmark, <sup>3</sup>Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland

**Introduction:** Creating and deploying new technologies in clinical setting is a design challenge. The TRIL clinic, operating since 2007, supports the development and evaluation of novel technologies and assessments to enable independent living in older adults. Participants and clinical research staff interact with new technologies and practices in an iterative learning process to inform design. The constant presence of new technologies and assessments is exciting and unfamiliar at the same time. This paper discusses the changing dynamics produced by the spatial and symbolic elements connected with the technologies' perceived association with health or research, the level of ‘transparency’ and the fluctuating expectations regarding their efficiency and authority.

**Methods:** Between 2010 and 2011 an ethnographic study was conducted in the TRIL clinic whereby 36 assessments were observed and 15 semi-structured interviews with participants conducted.

**Results:** The TRIL clinic is at the interface of health and research for what concerns both its assessment practices and its environment. The social roles of the clinical staff and participants constantly switch according to different activities from health providers to data collectors and from participants to patients respectively. When technologies are seen as experimental and unintelligible (i.e. lacking ‘transparency’) they risk disempowering and objectifying the clinical research staff and the participants while carrying the potential of being ‘playful’ and unassuming. Conversely, the more medicalised technologies are perceived to be the more staff and participants have insight into their results and can more likely connect them to health outcomes. This in turn has the potential to empower while increasing the possibility of associated anxieties.



**Discussion:** Technology in general and medical technologies in particular are powerful social actors. We suggest that awareness about their role, involvement in the design process and visualisation of results can support individuals managing technology rather than be managed by it.

## P126

### Characteristics of Adults with Syncope in a Population Study: Syncope in Youth as a Moderator for Recent Syncope and Health Outcomes in TILDA

Rose Anne Kenny<sup>1</sup>, Roman Romero<sup>2</sup>, Diarmuid O'Shea<sup>3</sup>,  
Bellinda King-Kallimanis<sup>1</sup>

<sup>1</sup>The Irish Longitudinal Study on Ageing, Trinity College Dublin, Dublin, Ireland, <sup>2</sup>St. James's Hospital, Dublin, Ireland, <sup>3</sup>St Vincent's University Hospital, Dublin, Ireland

**Introduction:** Approximately 40 % of the population will experience a faint; commonly due to vasovagal syncope (VVS). Syncope peaks between the ages of 17–25 and again later in life when cardiac causes are common. VVS is considered benign—a physiological response to orthostatic or psychological stress rather than a pathophysiological condition. This study examined clinical correlates of syncope and explored whether syncope in youth affects the relationship between recent syncope and current health outcomes—self-reported health (SRH), disabilities, quality-of-life (QoL), depression, anxiety, memory and fear of falling.

**Methods:** Data is from a population based sample (the Irish Longitudinal Study on Ageing-TILDA) of community dwelling adults  $\geq 50$  years ( $N = 8,149$ ). Syncope was assessed with the self-reported history: 'have you ever fainted' (3.9 %); number of episodes in past year (range 1–83); and fainters were asked to recall whether they fainted in youth (22.3 %). Multivariate regression models were used controlling for; sex, education, age and comorbidities.

**Results:** The majority of lifetime fainters were female (72.9 %), did not differ in age (non-fainters (mean = 62.0) vs. lifetime fainters (mean = 63.5) and half (52.9 %) had at least one comorbidity. Multivariate regression results suggested adults with recent syncope had worse depression, SRH, day-to-day memory, lower QoL, were more fearful of falling, absent minded, and more limitations (IADLs and ADLs). Youth syncope was associated with worse anxiety. Finally, syncope in youth moderated the relationship between recent syncope, SRH and depression in relation to multiple syncopal episodes. Multiple fainters with no youth syncope had worse depression ( $B = -6.72$ ,  $p < 0.001$ ) and worse SRH ( $B = 0.19$ ,  $p = 0.001$ ), than multiple fainters with youth syncope.

**Discussion:** Results suggest that the effects of syncope on health outcomes are detrimental and syncope in youth can have lifelong impact. When designing interventions to improve health outcomes, both syncope history and number of recent episodes should be considered.

## P127

### Profile of People With Parkinson's Disease Receiving Physiotherapy in Acute Hospital and Community Settings

Siobhan Twomey<sup>1</sup>, Claire Trotter<sup>1</sup>, Melissa E. Chavira<sup>2</sup>,  
Lucinda Edge<sup>2</sup>, Eimear Ring<sup>3</sup>, Laura Fitzharris<sup>3</sup>, Miriam Mullaney<sup>4</sup>,  
Conor Mc Nally<sup>4</sup>, Michelle Spencer<sup>5</sup>, Mohammed Atham<sup>5</sup>

<sup>1</sup>Tallaght Hospital, Dublin, Ireland, <sup>2</sup>St. James's Hospital, Dublin, Ireland, <sup>3</sup>HSE Dublin West, Dublin, Ireland, <sup>4</sup>HSE Dublin South West, Dublin, Ireland, <sup>5</sup>HSE Dublin South City, Dublin, Ireland

**Introduction:** Parkinson's Disease (PD) is a neurodegenerative disorder of the central nervous system. Patients commonly present with this condition to physiotherapists in both acute hospitals and community settings. No baseline data exists regarding disease severity and how patients access these physiotherapy services. The aims of this study were to establish patient demographics; disease severity; the distribution of disease severity between acute hospital and community settings and to identify who made the initial diagnosis.

**Methods:** Physiotherapists completed a chart audit, using a standardised profiling form, on patients with PD or a related diagnosis. Data was collected on patients attending physiotherapy from February through July 2011. Data was analysed via SPSS and descriptive statistics. Ethical approval was not required.

**Results:** The mean age of patients ( $n = 125$ ) was 75.92 years, with a gender distribution of 52.8 % male. Patient age was evenly distributed across physiotherapy services (hospital  $75.42 \pm 8.38$ ; community  $77.17 \pm 8.21$ ). The mean years since initial diagnosis was 5.2, with 80 % given a definite diagnosis of PD, 12.8 % a related diagnosis, and 7.2 % a queried diagnosis. Patients were referred to physiotherapy for assessment and treatment of mobility issues (44 %), falls (26.4 %) and PD (17.6 %).

The majority of patients were classified as Stage 3 Hoehn and Yahr (22.4 %). The remainder were 18.4 % (stage 1), 23.2 % (stage 2), 24 % (stage 4) and 10.4 % (stage 5). The level of disease severity was evenly distributed between the acute hospital and community setting. Almost half (46.4 %) were diagnosed by Neurologists, 30.4 % by Geriatricians, 4 % by GPs, and 19.2 % unknown.

**Discussion:** Key demographics of this patient group were identified. The results of this study will help optimise physiotherapy services provided to patients with PD in acute hospitals and community settings. Further research should determine the cost effectiveness of physiotherapy interventions in different locations.

## P128

### Point Prevalence Study of Patients Awaiting Long Term Care and Hospital Acquired Infections in an Acute Hospital

Mary Buckley, Hung Yui, Catherine Peters, Declan Lyons

Department of Elderly Medicine, Mid Western Regional Hospital, Limerick, Ireland

**Introduction:** "Bed Blocking" has become an all too familiar phrase in Irish hospitals. Delayed discharges result in a decreased number of acute hospital beds, add to the "trolley crisis" and budgetary constraints, but most importantly lead to an increased risk of hospital acquired infection (HAI). The aim of this study was to assess the point prevalence of patients awaiting long-term care in a 335-bed teaching hospital and document days delayed and associated cost and development of hospital acquired infection.

**Methods:** A list of patients over 65 awaiting placement was obtained from bed management. The patients' medical notes were reviewed and the date of medical discharge and the subsequent development of hospital acquired infection noted. The number of "bed days" lost and the cost involved was calculated.

**Results:** 15 patients were awaiting placement (4.5 % of total patients in hospital). 5 were male and 10 female. The average age was

79.9 years (65–92). The number of bed days lost was 664 days with an average of 44.2 days per patient (range 6–167). The total cost associated was €866,289, an average of €57,752 per patient (€7,746–€215,597). 4 patients (26 %) contracted a HAI. 2 patients had more than one infection. Infections included clostridium difficile (1), Norovirus (1), E. coli (1), urinary tract infections (2) and lower respiratory tract infection (1).

**Discussion:** In this large teaching hospital, 4.5 % of patients were awaiting long-term care and 26 % of these acquired a hospital associated infection. Although the numbers are small, the results are significant and highlight the need for an improved system of transfer of care from acute services to continuing care.

## P129

### Focal Neurological Events Among Patients with Syncope

Daniel Ryan, Ciara Rice, Joseph Harbison, Roseanne Kenny

St. James's Hospital, Dublin, Ireland

**Introduction:** Syncope represents global hypoperfusion. Apparently, therefore it is not associated with focal neurological symptoms. Clinical experience, however, suggests that it is. Accordingly, we conducted a prospective study to investigate the correlation between syncope or pre-syncope and focal neurological episodes.

**Methods:** All attendees of the Syncope Unit at St. James's Hospital from January to May 2012 completed a questionnaire. Validated assessment tools were used to examine syncope burden, and the presence of TIA/stroke episodes, migraine, somatoform disorder (PHQ15) and vascular risk. In all suspected cases follow-up telephone interviews were carried out.

**Results:** In total 405 patients completed the questionnaire. 75 underwent a follow-up telephone interview with a stroke physician. 23 patients reported focal neurological symptoms at the time of their hypotensive events (prevalence of 5.6 %). The mean age was 47 years, 77 % were female. Twelve patients reported a monoparesis/dysaesthesia, 7 reported hemiparesis/dysaesthesia, 4 reported an isolated facial droop. The median symptom duration was 5 min and the median number of events was 15. Hypotensive symptoms preceded the focal neurology in 30 % (n = 7) of cases while the time of onset was the same in 40 % (n = 9). Patients reported these symptoms to a doctor in only 26 % of cases (n = 6). The 23 patients were then compared with 3:1 age and gender matched controls (n = 92). In the multi-variate analysis, those with focal neurology were more likely to describe childhood syncope (p = 0.006) and self-report fatigue as per PHQ15 (p = 0.008). There was no difference between both groups for syncope burden (p = 0.45), migraine (p = 0.34), depression (p = 0.69) and vascular risk factors (p = 0.34).

**Discussion:** Focal neurology occurs during hypotensive events in 5 % of syncope patients. It is most prevalent in those that report childhood syncope, suggesting a possible genetic link. These patients may represent a subgroup of vasovagal syncope in which syncope potentially induces localised cerebral tissue damage.

## P130

### Audit of Acute Stroke Care: From the Emergency Department to the Acute Stroke Unit

Melissa McDonnell, Claire Reynolds, Eilis Nic Dhonncha, Aine O'Connell, Martin O'Donnell, Thomas Walsh

University College Hospital Galway, Galway, Ireland

**Introduction:** Stroke is the third leading cause of death and the leading cause of adult disability worldwide. International evidence suggests that Acute Stroke Units (ASU) reduce death and disability by 25 % (Langhorne, 1993). Previous audits in our institution have highlighted deficiencies (Lannon 2011). To address this we developed and implemented an acute stroke integrated care pathway (ASICP) in July 2010 to optimise patient care from the Emergency Department to the ASU.

**Methods:** A cross-sectional audit of ASU admissions in University College Hospital Galway (UCHG) between July 2011 and January 2012 was performed. Case-notes for 73/105 stroke patients were available and retrospectively analysed. Comparison was made with data from 2005 to 2008.

**Results:** Mean age of patients was 73.2 (SD 14.6, range 35–91) years. 48 (66.7 %) were male. All patients had CT brain performed within 24 h of admission in a mean time of 243 min (range 3 min to 18 h), compared with 23 % in 2005 and 96 % in 2008. Scans were reported in an average time of 43 (range 6–139) minutes. All patients received aspirin within 24 h of admission, improving from 40 to 93 % within 48 h in 2005 and 2008. 17 patients presented within the thrombolysis window and were assessed for suitability for thrombolysis. 5/72 (6.9 %) patients were thrombolysed with a mean onset-to-needle and door-to-needle time of 153 and 74.2 min respectively. All thrombolysis patients underwent repeat CT brain within 24 h with no complications.

**Discussion:** Processes of care for patients with acute stroke have markedly improved at UCHG since 2008. Access to the ASU, neuroimaging and thrombolysis has improved with an increase in early aspirin administration; implementation of the ASICP may have contributed to this. On-going education is necessary to ensure continued adherence to best practice. Introducing a specialist stroke nurse may further enhance patient care.

## P131

### Taking the Hype Out of Hipe: A Comparison of Acute Hospital Use by Older Residents of Nursing Homes

O'Keeffe Jonathon, Carey Therese, Tan Kit Mun, O'Shea Diarmuid, Hughes Graham

Medicine for the Elderly Department, St. Vincent's University Hospital, Dublin, Ireland

**Introduction:** Service consumption, provision and planning require access to reliable data on healthcare use by discreet patient populations. The Hospital In-patient Enquiry (HIPE) system is relied on nationally to inform this discourse. In this study we compare HIPE data with prospectively recorded acute hospital activity captured as part of usual care from the Nursing Home in-patient liaison service (LS) in our Dublin Hospital.

**Methods:** A discreet reporting query was developed from our Emergency Department's Maxims patient database to identify acute hospital activity generated by older patients from local Nursing Homes. This database has been in use in our hospital for more than 10 years. Patient admission activity, average length of stay (ALOS), re-admission & mortality rates for the period October 2010 to December 2011 were compared with local HIPE data from the same period.

**Results:** 534 (6.5 % hospital admissions) patient episodes were prospectively identified by the LS; of these HIPE identified 108 episodes

(20.2 %). LS recorded re-admission rate over the time period is 18.4 %. Re-admission rates at 1, 3, 6 & 12 months respectively is 12.4, 21.9, 27.9 & 29.4 %. Re-admission rate from HIPE is 21.3 %. HIPE re-admission rates at 1, 3, 6 & 12 months respectively are 34, 58, 73 and 80 %. LS recorded ALOS is 8 versus 18 days from HIPE. LS recorded in-patient mortality rate is 12.4 % versus HIPE recorded mortality rate of 15.7 %.

**Discussion:** Current national reporting mechanisms for recording acute hospital activity by older people resident in nursing homes appear inadequate. It is likely that many from this patient group receive acute hospital care that is lacking in the appropriate expertise despite the described negative patient outcomes. We recommend that an improvement in accurate identification of this patient cohort is prioritised nationally.

## P132

### The Use of a Questionnaire to Assess Vitamin D Status in an Elderly Population

Miriam Barry<sup>1</sup>, Cora McGreevy<sup>1</sup>, Brendan Byrne<sup>2</sup>,  
Caroline Donaghy<sup>2</sup>, Ciran Donegan<sup>1</sup>, Alan Moore<sup>1</sup>, Bill Tormey<sup>2</sup>,  
Ger Collier<sup>2</sup>, David Williams<sup>1</sup>

<sup>1</sup>Department of Geriatric and Stroke Medicine, Beaumont Hospital, Royal College of Surgeons Ireland, Dublin, Ireland, <sup>2</sup>Department of Chemical Pathology Beaumont Hospital, Dublin, Ireland

**Introduction:** Vitamin D has been shown to be important in many areas of health in addition to its long standing association with bone health.<sup>1</sup> Vitamin D is a fat soluble vitamin that is obtained from the action of sun light on the skin, some foods and supplements. Deficiency of vitamin D is prevalent in many countries around the world including countries at high latitude such as Ireland. Previous research in different population age groups shows that the use of a questionnaire may help to identify Vitamin D deficiency.<sup>2</sup> This research will also provide some indication of the prevalence on deficiency in this population. We hypothesised that the use of a questionnaire in an elderly population (65 years or older) could be used to identify patients with Vitamin D deficiency.

**Methods:** We applied a questionnaire to a sample of 113 patients (M:F, 54:59 mean age 81 years, SD 6.4)  $\geq 65$  years. Serum 25 hydroxyvitamin (OH)D was measured using vitamin D assay LCMS (liquid chromatography/mass spectrometry). Vitamin D deficiency was defined as 25(OH)D  $< 50$  nmol/L.

**Results:** In this sample 70 (63.1 %) had vitamin D deficiency. Taking a multivitamin or cod liver oil was associated with having normal vitamin D levels ( $\chi^2$ ;  $p = 0.0001$ ). The questionnaire had only 54 % sensitivity but 96 % specificity identifying Vitamin D deficiency.

**Discussion:** Taking cod liver oil and/or a multivitamin was associated with adequate vitamin D levels in our cohort. A questionnaire may be useful in identifying vitamin D deficiency in clinical settings. Further validation of this questionnaire is recommended in a larger sample.

#### References:

- Adams JS, Hewison M (2010) Update in Vitamin D. J Clin Endocrinol Metab 95(2):471–475
- Bolek-Berquist J et al (2009) Use of a questionnaire to assess vitamin D status in young adults. Public Health Nutr 12(2):236–243.

## P133

### Introduction of a Weekend Discharge Initiative in an Acute General Hospital: A Comparative Study

Ruth Martin, Kieran Anthony O'Connor

Mercy University Hospital, Cork City, Ireland

**Introduction:** At least 80 % of hospital discharges can be classified as simple. However, weekend discharges are significantly lower than weekday discharges. This reduction has a knock-on effect causing cancellation of elective admissions. In March 2011 our hospital introduced a weekend discharge initiative. Each service was encouraged by the clinical director to consider patients for discharge over the weekend instead of waiting until Monday; a lists of these discharges was collated on Thursdays and Fridays by CNM1 s; the admissions CNM2 collated a hospital wide list for the medical registrar on-call on Saturday and Sunday, who was given the responsibility of reviewing these patients to actively arrange appropriate discharge. The aim of this study was to examine whether this weekend discharge initiative increased weekend discharges and reduced fluctuations in beds available for planned admissions.

**Methods:** To minimise bias we compared data collected with a comparison hospital with similar services. In both sites data was collected prior to the initiative (April–September 2010) and following (April–September 2011). Calculations of overall length of stay (LOS) and LOS based on day of admission and discharge, as well as daily discharge percentages were made.

**Results:** Following the introduction of our weekend discharge initiative the percentages of weekend medical discharges increased on Saturdays from 6.9 to 7.4 % and Sundays from 2.2 to 4 %, from 2010 to 2011. The percentages in the comparison hospital increased on Saturdays from 5.5 to 6.5 % but decreased on Sundays from 3.1 to 2.8 %. There was also a decrease in LOS of over a day on Monday discharges in our hospital. The average LOS over both sites decreased.

**Discussion:** This study shows a positive outcome from a simple weekend discharge initiative and highlights the importance for ongoing input in this area to improve weekend discharge figures and decrease LOS. Although there were gains with this initiative further work is needed to ensure weekend discharge numbers are improved further.

## P134

### Attitudes to Personal Ageing: An Existential Perspective

Frances O'Donnell, Ann O'Hanlon, Moira Maguire

Dundalk Institute of Technology, Co. Louth, Ireland

**Introduction:** Over the last half century, much has been learned about the physical, social and psychological processes involved in human ageing (Coleman, 2011), but the existential dimension of the ageing experience has received little attention. This is surprising,

given that later life gives rise to fundamental questions about the meaning and purpose of life in the face of reduced resources and the growing awareness of limitation and finitude. This study explored mid-life and older adults' perceptions of their own ageing and with particular attention to meanings attached to the ageing process.

**Methods:** The study was an exploratory qualitative study in which four groups of community-dwelling mid-life and older Irish adults ( $n = 21$ ) took part in focus group discussions. The participants were identified through convenience sampling. The sample was comprised of 6 (29 %) males and 15 (71 %) females. Their mean age was 73.6 years ( $SD = 5.49$ ; range 64–82). Data was transcribed verbatim and analysed following Braun & Clarke's (2006) guidelines for thematic analysis.

**Results:** Complex and often contradictory themes emerged from the focus group discussions. On one hand, participants vehemently rejected ageing and its attendant stereotypes. At the same time, however, they were cognisant of temporal limitations and of their own mortality. Additionally, the importance of religion as a provider of both personal and existential meaning was also emphasised.

**Discussion:** These findings highlight the complexity of the lived experience of ageing, and the need to look beyond the current emphasis on biological and psychosocial aspects of ageing.

#### References:

- Braun V, Clarke V (2006) Using thematic analysis in psychology. *Qual Res Psychol* 3:77–101  
 Coleman PG (2011). In: Coleman PG (ed) *Belief and ageing: spiritual pathways in later life*. Bristol, Policy Press, pp 1–12.

## P135

### A SPARC Approach to Off Site Rehabilitation: Our Experience

Kit Mun Tan<sup>2</sup>, Roman Romero Ortuno<sup>3</sup>, Joanna McGlynn<sup>1</sup>, Noreen Frawley<sup>1</sup>, Patricia O'Reilly<sup>1</sup>, Olivia Sinclair<sup>1</sup>, Lisa Cogan<sup>1</sup>

<sup>1</sup>The Royal Hospital Donnybrook, Dublin 4, Ireland, <sup>2</sup>St Vincent's University Hospital, Dublin 4, Ireland, <sup>3</sup>Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland

**Introduction:** The SPARC (short-term post acute rehabilitative care) service was launched in our centre in July 2011. The objective of the service was to provide geriatrician led multidisciplinary rehabilitation to medically stable older patients to optimise their recovery and independence. Referrals are from our local 480-bed acute tertiary hospital. The service operated as a 10-bed unit for the first 8 months later increasing to 18 beds. The aim of this study was to provide a preliminary review of activity over a 10 month period.

**Methods:** 110 patients were studied. Mean age was 81.6 years ( $SD 7.1$ ). 60.8 % were females. On average patients spent 14 days ( $SD 13.9$ ) in the acute hospital prior to admission. 53.9 % were referred by Medicine, 18.6 % by Emergency Department Geriatric Medicine Liaison service and 17.6 % by Orthopaedics. The majority of patients (51 %) were admitted due to falls and non surgical fractures. Other reasons were rehabilitation post-surgical procedure (17.6 %), respiratory illness (9.8 %) and congestive heart failure (5.9 %).

**Results:** The mean Barthel Index (BI) on admission was 13.9 ( $SD 3.3$ ) and the mean BI on discharge was 15.9 ( $SD 3.3$ ). The change in BI was significant as tested by the paired Wilcoxon Signed Ranks Test ( $P < 0.001$ ). 89.0 % of patients were discharged home, 3.7 % to a nursing home. 77.2 % of the patients had a length of stay of 6 weeks or less.

**Discussion:** The results of this activity study suggest that this off-site rehabilitation service is effective in rehabilitating older patients following the stabilisation of their acute medical illness. All referrals are assessed by our medical and nursing staff to ensure the most appropriate patients are selected. Coordination and proactive discharge planning ensure timely and safe discharge. The service will develop through on-going liaison with our acute tertiary referral hospital and primary care clinical colleagues.

## P136

### A Review of Osteoporosis Treatment in a Continuing Care Setting

Erica Murphy<sup>1</sup>, Kit Mun Tan<sup>2</sup>, John O'Keefe<sup>3</sup>, Barbara Smyth<sup>3</sup>, Joanna McGlynn<sup>3</sup>, Lisa Cogan<sup>3</sup>

<sup>1</sup>University College Dublin/Health Service Executive Mid-Leinster General Practitioner Training Scheme, Dublin, Ireland, <sup>2</sup>St Vincents' University Hospital, Dublin, Ireland, <sup>3</sup>The Royal Hospital Donnybrook, Dublin, Ireland

**Introduction:** The benefits of osteoporosis treatment in patients with osteoporosis and fragility fractures are well known but significant adverse effects of treatment must also be considered. Patients' clinical condition can also change over time. The issues surrounding osteoporosis treatment are relevant to general practice, hospital and continuing care settings. We aimed to review the appropriateness of osteoporosis treatment in patients in a continuing care setting.

**Methods:** Patients' diagnoses, indications, contraindications and side effects of osteoporosis treatment were reviewed in the medical notes, drug kardexes and nursing notes. Staff nurses were interviewed about each patient's mobility, compliance, side effects.

**Results:** 60 continuing care patients (average age 79.3 years, Barthel Index <sup>4</sup>/<sub>20</sub>, Stratify falls risk score of 2) in our institution were reviewed. 35 patients were on calcium and vitamin D replacement. 15 were on osteoporosis treatment (14 bisphosphonates and one on subcutaneous denosumab).

Of 14 patients on bisphosphonates, 3 patients were unable to comply with instructions for taking bisphosphonates (dementia), 2 patients had their bisphosphonates crushed, 5 had complaints of upper gastrointestinal symptoms and 1 patient complained of thigh pain (possibility of atypical femoral fracture considered but not found). 7 ambulant patients at falls risk were not on osteoporosis treatment and did not have a DEXA scan on record. Overall 7 patients (12 %) required their medications changed/stopped based on these results. 18 patients (30 %) required other action taken e.g; DEXA scans and bloods including serum calcium, renal profile and Vitamin D ordered.

**Discussion:** Treatment in patients with osteoporotic T scores on DEXA scan or with fragility fractures and increased falls risk is beneficial but can cause serious adverse effects. Frail patients in continuing care require regular treatment reviews in a systematic manner as the patient's clinical condition and appropriateness of treatment can change over time.

## P137

### Oral Anticoagulant Prescribing in Patients with Atrial Fibrillation in a Public Continuing Care Facility

Louise Smyth<sup>1</sup>, Tariq Zainal<sup>1</sup>, Morgan Crowe<sup>2</sup>, Lisa Cogan<sup>1</sup>



<sup>1</sup>The Royal Hospital Donnybrook, Dublin 4, Ireland, <sup>2</sup>St Vincent's University Hospital, Dublin 4, Ireland

**Introduction:** Oral anticoagulant therapy (OAC) reduces the risk of stroke in patients with atrial fibrillation (AF). Current European guidelines recommend that OAC prescribing in AF should be based upon the absolute risk of stroke versus bleeding risk and the relative risk and benefit for the individual patient. The aim of this study was to look at compliance with these guidelines in a selected public continuing care facility.

**Methods:** 53 complex continuing care patients were studied. Clinical notes were reviewed for a diagnosis of AF and Paroxysmal Atrial Fibrillation (PAF). Palpation of radial pulse and Electrocardiogram (ECG) tracings were recorded. Patients with evidence of AF from any of these three methods had CHADS2 and HAS-BLED scores calculated. Contraindications to OAC therapy were documented.

**Results:** of the 53 patients 46 (87 %) were  $\geq 70$  years, 7 (13 %) were 60–70 years. 12 (23 %) had a history of AF. 8 (15 %) had persistent AF confirmed on ECG. 4 (8 %) had a diagnosis of PAF. Of the 8 with AF 4 (50 %) were on OAC. All 8 AF patients had CHADS2 of  $\geq 3$  and HAS-BLED of  $\geq 4$ . Of the 4 PAF patients none were on OAC. 4 had a CHADS2 of  $\geq 3$  and a HAS-BLED of  $\geq 3$ . Contraindications to OAC included advanced dementia (6 patients) and gastrointestinal bleed (2 patients).

**Discussion:** This small study identifies the challenges of balancing risk versus benefit of OAC therapy in patients with AF and PAF in a continuing care setting. Both CHADS2 and HAS-BLED scores were high in all cases identifying risks of both stroke and bleeding. Many patients have advanced dementia which further complicates treatment due to compliance, falls risk and appropriateness of invasive INR monitoring. Of the patients with established AF and PAF in our setting a third were deemed clinically suitable for OAC.

## P138

### Prevalence of Vitamin D Deficiency Among Patients with Acute Stroke

Adriana Hadbavna, Alan Moore, Ciaran Donegan, David Williams

Beaumont Hospital, Dublin, Ireland

**Introduction:** A number of recent studies have reported an association between low vitamin D levels and risk of stroke. One recent study has reported a modest association between low vitamin D level and risk of stroke (RR 1.59).<sup>1</sup> Furthermore vitamin D deficiency is also associated with an increased risk of falls following stroke, endothelial dysfunction and cardiovascular disease.

Among Irish elderly women in particular, the levels of 25(OH) vitamin D are significantly lower in winter months (40–47 %) than in summer months (20 %).<sup>2</sup>

We aimed to determine the prevalence of vitamin D deficiency (defined as 25(OH) D < 50 ng/ml) among a group of patients admitted with stroke.

**Methods:** Levels of vitamin D were determined among 43 patients admitted to the stroke service between August 2011 and February 2012.

**Results:** 43 patients [M:F, 25:18, mean age 70.4 (SD 12.4)] were evaluated. Vitamin D deficiency was present in 67.4 % of patients [56 % (n = 14) in males and 83 % (n = 15) in females]. The prevalence of vitamin D deficiency in older ( $\geq 65$ ) patients was 68.7 % and in younger (<65) patients 63.6 % (p = 0.6). Prevalence

of low 25(OH) D in elderly stroke male patients was 53 and 82 % in elderly stroke female patients.

**Discussion:** Our study showed that prevalence of low vitamin D among patients with acute stroke was significantly higher than previously documented among healthy elderly Irish females and remained low in both summer and winter months. Vitamin D deficiency may represent a modifiable risk factor for future stroke.

#### References:

<sup>1</sup>Sun Q et al (2012) Stroke, Mar 22 (Epub ahead of print)

<sup>2</sup>McCarthy D et al (2006) Ir J Med Sci 175(2):14–20

## P139

### Baseline Characteristics of a Cohort of Patients with Ischaemic Strokes

Ontefetse Ntlholang<sup>1</sup>, Imelda Noone<sup>1</sup>, Serena Hatton<sup>1</sup>, Kit Mun Tan<sup>1</sup>, Graham Hughes<sup>1</sup>, Diarmuid O'Shea<sup>1</sup>, Niall Tubridy<sup>2</sup>, Sean O'Riordan<sup>2</sup>, Chris McGuigan<sup>2</sup>, Morgan Crowe<sup>1</sup>

<sup>1</sup>Department of Medicine for the Elderly, St Vincent's University Hospital, Dublin, Ireland, <sup>2</sup>Department of Neurology, St Vincent's University Hospital, Dublin, Ireland

**Introduction:** Ischaemic stroke is potentially preventable if known risk factors are addressed. Risk factors are classified into modifiable and non-modifiable. It is crucial to identify and address modifiable risk factors to prevent cardiovascular diseases including ischaemic stroke. We aim to identify baseline characteristics of a cohort of patients who presented with ischaemic stroke.

**Methods:** A database of stroke patients in our hospital was reviewed and those with diagnoses of ischaemic stroke admitted from the first of January 2011 to the thirtieth of June 2011 were selected. Their clinical data was used to identify their characteristics and were divided into 3 groups, less than (<) 65 years, 65–79 years and over or equal to ( $\geq$ ) 80 years of age.

**Results:** One hundred patients were admitted with ischaemic stroke of whom 57 (57 %) were males. 47 % patients were aged  $\geq 80$  whilst 43 % were 65–79 years.

The main risk factors were hypertension 62 (62 %) of whom <sup>32</sup>/<sub>47</sub> (68.1 %) were aged  $\geq 80$  and <sup>26</sup>/<sub>43</sub> (60.5 %) were 65–79 years, atrial fibrillation 33 (33 %) of whom <sup>22</sup>/<sub>47</sub> (46.8 %) were aged  $\geq 80$  and <sup>11</sup>/<sub>43</sub> (25.6 %) were 65–79 years, ischaemic heart disease 33 (33 %) of whom <sup>14</sup>/<sub>47</sub> (29.8 %) were aged  $\geq 80$  and <sup>18</sup>/<sub>43</sub> (41.9 %) were 65–79 years, dyslipidaemia 27 (27 %) of whom <sup>11</sup>/<sub>47</sub> (23.4 %) were aged  $\geq 80$  and <sup>15</sup>/<sub>43</sub> (34.9 %) were 65–79 years, previous stroke/TIA 21 (21 %) of whom <sup>12</sup>/<sub>47</sub> (25.5 %) were aged  $\geq 80$  and <sup>8</sup>/<sub>43</sub> (18.6 %) were 65–79 years and significant ipsilateral ( $\geq 50$  %) carotid stenosis <sup>24</sup>/<sub>85</sub> (28.2 %) of whom <sup>9</sup>/<sub>38</sub> (23.7 %) were aged  $\geq 80$  years and <sup>15</sup>/<sub>40</sub> (37.5 %) were 65–79 years of age.

**Discussion:** Patients aged  $\geq 80$  years were mainly female (<sup>32</sup>/<sub>47</sub>, 68.1 %) and had higher prevalence of atrial fibrillation, hypertension and previous stroke/TIA. They also had lower prevalence of ischaemic heart disease, dyslipidaemia and significant ipsilateral carotid stenosis compared to the younger group (65–79 years).

## P140

### A Patient Over 90 Successfully Thrombolysed Twice

Clodagh Power<sup>2</sup>, John Bernard Walsh<sup>2</sup>, Joe Harbison<sup>2</sup>, Karl Boyle<sup>2</sup>

<sup>1</sup>St. James's Hospital, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland

**Introduction:** Recombinant tissue plasminogen activator is indicated for use in acute ischaemic stroke in patients under 80 as per the EMEA license. However, anecdotal and observational evidence suggest thrombolysis in patients over 80 may also be beneficial. IST-3, the first large-scale randomised, controlled trial to look at thrombolysis in patients over 80 showed that thrombolysis is indeed effective and safe in this age-group<sup>1</sup>.

**Case:** We present a 93 year old female who was thrombolysed in June 2010. She had a background of Crohn's disease, myelodysplasia and TIA. She lived with her daughter, was a non-smoker and fully independent. She presented with acute right-sided weakness and slurred speech. National Institute of Health Stroke Scale (NIHSS) was 18 and she was thrombolysed according to protocol. At 24 h NIHSS was 8. Following 3 weeks rehabilitation, she was discharged home, requiring minimal assistance for transfers and self-care. In February 2012, aged 94, she was thrombolysed for the second time following the onset of left arm weakness, facial droop and dysarthria. NIHSS was 10. Within 24 h there was a marked clinical improvement. She was discharged home after 3 days and was close to her previous functional baseline.

**Methods:** Review of patient chart and electronic record.

**Results:** Successful thrombolysis on two occasions in a patient over 90.

**Discussion:** This case illustrates the potential for a positive outcome in terms of functional status, hospital stay and quality of life that patients over 80 may derive from thrombolysis. This is in keeping with the findings of IST III and suggests that age alone should no longer be an exclusion factor when considering eligibility for thrombolysis.

#### References:

<sup>1</sup>The benefits and harms of intravenous thrombolysis with recombinant tissue plasminogen activator within 6 h of acute ischaemic stroke (the third international stroke trial [IST-3]): a randomised controlled trial IST-3 collaborative group. Published Online May 23, 2012 DOI: 10.1016/S0140-6736(12)60768-5.

## P141

### Standards of Medical Care for Nursing Home Residents in Europe

Robert Briggs<sup>1</sup>, Stephanie Robinson<sup>1</sup>, Finbarr Martin<sup>2</sup>, Desmond O'Neill<sup>1</sup>

<sup>1</sup>Centre for Ageing, Neuroscience and the Humanities, Tallaght Hospital, Dublin, Ireland, <sup>2</sup>Guys and St Thomas' NHS Foundation Trust, London, UK

**Introduction:** Nursing home inhabitants represent the most vulnerable and frail group of older people. They have more complex medical backgrounds and more significant care requirements. With an ever-ageing European population, the number of people requiring nursing home care will only increase. It is important then that we optimise the medical care of older people living in nursing homes.

**Methods:** Formalised care standards are essential to optimal care but we feel that such guidelines are lacking. We decided to investigate

this by means of a survey on nursing home care standards sent to the geriatric medicine societies around Europe.

**Results:** Only  $\frac{5}{25}$  (20 %) health services have a requirement for specific training in geriatric medicine for doctors in nursing homes, while only  $\frac{3}{25}$  (12 %) countries have written medical care standards applicable to nursing home care provided by professional organizations.  $\frac{4}{25}$  (16 %) had a nursing home doctor society and one of these, The Netherlands, provided written medical care standards for nursing homes, these guidelines were also adopted by the relevant general practitioner society.

**Discussion:** The Europe-wide deficiency of documented care standards for nursing homes is alarming. It should be a prerequisite that physicians dealing with these complex patients have undertaken some level of specific training in geriatric medicine. It is important that geriatricians, old age psychiatrists and family doctors across European countries engage more formally on the development of appropriate models for both developing care standards and specifying appropriate training and support for doctors working in nursing homes.

## P142

### Does Increased Medical Cover in Nursing Homes Reduce Transfers to A&E and Save Bed Days?

OC Sheehan, KPC Leung, S Lee, KA Harrington, A Moore, DJP Williams, D Gopinatham, C Donegan

Department of Geriatric Medicine, Beaumont Hospital, Dublin, Ireland

**Introduction:** Nursing home residents are hospitalised three times more frequently than community dwelling individuals, with 50 % of patients having recurrent admissions within the same year. The traditional model of medical cover in nursing homes is often inadequate, especially out of hours. We aimed to investigate if increased medical cover in nursing homes reduced transfers and admissions to hospital and saved acute bed days.

**Methods:** All transfers to hospital from 2 nursing homes within our catchment area were recorded over a 1 year period. Nursing home A had 2 h of medical cover per day with an on-call service out of hours. Nursing home B had 24 h on-site medical cover and access to radiology and phlebotomy during working hours. In nursing home B we recorded all medical interventions which usually require transfer to hospital from other nursing homes and calculated the bed days saved by the medical team treating these patients in the nursing home environment.

**Results:** 28 % ( $\frac{11}{40}$ ) of patients in nursing home A and 1 % ( $\frac{1}{75}$ ) of patients in nursing home B were transferred to hospital during the recruitment period. 74 medical interventions were carried out in nursing home B. Interventions varied but included diagnosis and treatment of conditions such as sepsis, myocardial infarction, pulmonary embolism and seizures. 941.4 acute bed days were saved by performing these interventions in the nursing home setting rather than an acute hospital.

**Discussion:** Increased medical cover in nursing homes reduces transfers to acute hospital and saves bed days. The optimum level of medical cover in nursing homes for both cost-effectiveness and good patient care has yet to be outlined.

## P143

**Stroke: Early Supported Discharge: An Opportunity Not to be Missed**

Helen O' Brien, Ciara Breen, Maria Ward, Michelle Canavan,  
Thomas Walsh

*University College Hospital Galway & Merlin Park Hospital, County Galway, Ireland*

**Introduction:** Early support discharge (ESD) allows selected patients with stroke to be discharged early with support from a community based multi-disciplinary team. ESD has been shown to improve patient outcomes, reducing dependency and institutionalisation while increasing independence, and reducing length of stay (LOS) by an average 8 days (Langhorne, Lancet 2005).

Our aim was to identify patients with stroke in 2 University Hospitals over a 3 month period, that would be eligible for an Early Supported Discharge (ESD) Programme.

**Methods:** From November 2011 to January 2012, an audit of all patients admitted with a stroke or who had a stroke while an inpatient was undertaken. Criteria and standards were based on evidence supporting ESD in a Cochrane Systematic Review in 2005 (Langhorne, Lancet 2005), a consensus document on Stroke ESD in 2011 (Fischer, Stroke 2011) and on results from the ESD Audit that took place in the Mater Misericordiae University Hospital, Dublin 2010. Inclusion criteria for ESD required the patient to be a resident of County Galway, medically stable and safe to return home (assistx1/independent for transfers).

**Results:** The total number of strokes identified was 41. The number of patients potentially suitable for ESD by inclusion criteria based on place of residence was 35. The number of patients suitable for ESD was 10 (28.6 %). This compares with 27.4 % in the Mater ESD Audit and 40 % in International studies. The audit demonstrated a potential saving of 159 bed days over the audit period.

**Discussion:** This audit shows that the overall LOS of a patient in hospital could be reduced with improvement in patient outcome and resultant cost savings, if an ESD programme were in place. Having identified a select patient group eligible for ESD in a mixed urban and rural setting, a pilot programme is needed to examine whether it is of benefit in this blended model.

## P144

**Colles Fractures: A Study of Patients from a Hospital Bone Database**

Maeve O'Sullivan, Kin Cheung (Philip) Ng, James Mahon,  
Georgina Steen, Niamh Maher, JB Walsh, Miriam Casey

*St James' Hospital, Dublin, Ireland*

**Introduction:** A study of all patients who attended the hospital's Bone Clinic with a colles fracture. We aimed to assess whether they had previous fractures, what type of fractures were most common and examined their DEXA scores.

**Methods:** Study design—Retrospective cohort study. All information was gathered from the Bone Database. This is a database of information on all patients who have attended our Bone Clinic. Patients'

information is entered onto the database by specialist nurses upon attendance at the Bone Clinic. The information was then correlated and analysed.

**Results:** A total of 803 patients with colles fractures attended said Bone Clinic during the period October 2003 and March 2012. Patients were divided into two groups, those seen between October 2003 and October 2008, and those seen between October 2008 and March 2012. Overall, 87 % were female and 13 % were male. 59 % had a history of previous fractures, 41 % had no previous fracture. Of those with a previous fracture, 42 % were vertebral, 38 % were hip and 57 % had other types. 29.5 % had a history of multiple fractures. Regarding DEXA scores, the average for patients with a previous fracture were: T Spine −2.63, T Hip −2.34. The average for patients with no previous fracture was: T Spine −2.4, T Hip −1.93.

**Discussion:** A significant number of patients with colles fractures have a history of other fractures. The majority of affected patients are female. Patients who have had a previous fracture(s) tend to have a worse T Score on their DEXA Scan. The data would suggest that this target group—patients with a history of fractures—may benefit from a more aggressive screening and treatment regime.

## P145

**Outcomes in Patients Who Have Fractured the Neck of Femur Following Introduction of a Fracture Liaison Service**

Jude Ryan, Audrey Butler, Sheila Carew, Tina Sheehy,  
Aine Costelloe, Brian Lenehan, Catherine Peters,  
Margaret O' Connor, Declan Lyons

*Department of Medicine Division of Ageing, Midwestern Regional Hospital, Limerick, Ireland*

**Introduction:** Fractures of the neck of femur may commonly indicate advanced osteoporosis and therapeutic interventions to slow bone loss and improve fracture risk have been shown to lead to better outcomes. We looked at the outcomes in the first 8 months following the establishment of a fracture liaison service in a regional hospital.

**Methods:** A fracture liaison service was established in July 2011. All patients who were admitted following a fractured neck of femur were assessed in the perioperative period by a geriatric physician with a special interest in bone health and offered follow-up investigations which included DEXA, laboratory markers of bone health and a falls work-up. Outcome parameters included survival, re-admission rates, length of stay and compliance with follow up. We compared length of stay with 2010 prior to the establishment of the fracture liaison service.

**Results:** There were 155 patients admitted with fractured neck of femur during the 8 month study period,  $^{111}_{155}$  females. Median age was 81 (53–94) years. Median length of stay was 8 (2–40) days, compared with 9 (2–56) days in 2010. The overall mortality was  $^{10}_{155}$  and 30-day mortality was  $^6_{155}$ . The 30-day readmissions were  $^{10}_{155}$ . Follow up was offered to 112 patients to date and of these 75 patients have attended for bone health and falls investigations.

**Discussion:** These results indicate that a fracture liaison service can reduce length of stay for patients after a fractured neck of femur. Further work is needed to establish whether this service and improved compliance with follow up can influence longer term outcome measures.

## P146

**Prescribing Characteristics and Relationship to Length of Stay Among the Hospitalised Elderly**

OC Sheehan<sup>1</sup>, AH Lavan<sup>1</sup>, ÓM Dunne<sup>2</sup>, A Moore<sup>1</sup>, C Donegan<sup>1</sup>, DJP Williams<sup>1</sup>

<sup>1</sup>Department of Geriatric Medicine, Beaumont Hospital, Dublin, Ireland, <sup>2</sup>Royal College of Surgeons of Ireland, Beaumont Hospital, Dublin, Ireland

**Introduction:** In Ireland over the last 10 years the number of people over the age of 65 years has risen by 20.2 %. Medication use increases with advancing age and contributes to the susceptibility of the elderly population to adverse drug events (ADEs). We aimed to examine prescribing practices in elderly patients and the effect of prescriptions on length of stay (LOS).

**Methods:** Prescriptions for patients on four wards (two medical, two surgical) were studied over a 24-h period.

**Results:** 133 patients (49.6 % male, 52.6 % medical) were included. Mean age 73.6 years (SD 16.4). 99 patients (74.4 %) were over 65 years with 62 (46.6 %) aged over 80. The number of elderly patients was similar on medical and surgical wards ( $p = 0.1$ ).

No difference was observed in total number of prescription items in those above and below 65 years (14.3 vs. 12.6,  $p = 0.1$ ). Mean number of regular, stat and ‘as required’ medications per patient were 10.5 (SD 4.7), 0.9 (SD 1.7), 2.9 (SD 1.9) respectively. Number of medications prescribed were similar for men and women ( $p = 0.5$ ). The number of prescription items was higher in those aged over 80 years ( $n = 15.2$ ) compared with those under 80 years ( $n = 12.7$ ),  $p = 0.009$ .

Average LOS was 42.0 days (IQR 5–53). LOS rose with advancing age (33.5 days <80 years vs. 52.3 days >80,  $p = 0.06$ ). LOS was positively associated with increasing number of prescription items (Pearson’s correlation 0.29,  $p = 0.001$ ).

**Discussion:** Polypharmacy was common in our population. Prescribing rates were higher in patients over 80 thus increasing the risk of ADEs in this population. Increased prescribing rates were associated with longer length of stay. Further study is required to determine if the increased LOS is due to increased number of co-morbidities, increased ADEs from polypharmacy or is confounded by an increased ‘opportunity’ to prescribe in this cohort of patients.

## P147

**An Inpatient Study of the Documentation of Weight, Height and Body Mass Index with Appropriate Management and Advice to Patients at Increased Risk**

Shilpa Purushotham, Joanne Kitchen, Riona Mulcahy

Waterford Regional Hospital, Waterford, Ireland

**Introduction:** The prevalence of overweight and obese adults has increased dramatically in the last 20 years. Obesity is associated with significant increased risk of medical and psychosocial problems including hypertension, diabetes, osteoarthritis & cardiovascular disease. In Ireland, 39 % of adults are overweight and 18 % are obese. Inpatient stay is an ideal time to highlight the risks of raised Body mass index (BMI) and advise accordingly. The aim of our study was to assess the documentation of weight, height and BMI and make appropriate recommendations.

**Methods:** A random analysis of 50 medical inpatients over 65 years was assessed for documentation of weight, height and BMI. Admitting diagnoses, co-morbid conditions and baseline mobility were recorded. Subsequent dietary advice with appropriate referral to dietician was noted.

**Results:** Weight was recorded in  $34/50$  (68 %) and height in 3 (6 %). BMI was calculated in 12 (24 %). Admitting diagnoses included cardiac 19 (38 %), stroke/transient ischaemic attack 12 (24 %), respiratory tract infection 9 (18 %). Co-morbidities included hypertension (23 %), chronic obstructive pulmonary disease (15 %), diabetes (12 %) & cardiac disease (25 %). 13 (26 %) were smokers and 26 (52 %) used a walking aid. Referral to dietician occurred in 4 (8 %) and weight loss advice was documented in 2 (4 %).

**Discussion:** Most inpatients admitted do not have height and BMI recorded. Despite significant co-morbidities and mobility issues, appropriate referrals were not made to the dietician and dietary and exercise advice was not documented. Increased awareness of the risks associated with being overweight and obesity is required with appropriate inpatient management and advice.

## P148

**Falls Management in an Acute Hospital**

Georgina Steen, Kara Fitzgerald, Nessa Fallon, Niamh Maher, Miriam Casey, Joseph Harbison, Roseanne Kenny, JB Walsh, Conal Cunningham

Bone Health Service, Mercers Institute for Research on Ageing. St. James’s Hospital, Dublin, Ireland

**Introduction:** A fall is defined as a sudden, unintentional change in position causing an individual to land at a lower level, on an object, the floor, or the ground, other than the consequence of sudden onset of paralysis, epileptic seizure or over whelming external force. One-third of people over 65 have a fall each year and the risk of falling increases as age rises. Falls can seriously impact independence, resulting in on-going disability, changes in living arrangements, reduced activity and can result in social isolation and even death. Most fractures amongst older adults are caused by falls, with the most common being spine, hip, forearm, leg, ankle, pelvis, upper hand and hand. Over 90 % of hip fractures are caused by falls.

**Methods:** A Falls, Osteoporosis and Blackout service was established by the Medicine for the Elderly Directorate (MeDEL) in St. James’s Hospital in 2003. A nurse-led falls management programme was set up and all patients admitted to MeDEL are assessed for risk of falls/injury using the STRATIFY falls risk assessment tool. If patients scores 2 < falls prevention strategies are in place with consent. These include an I.D. bracelet, faller alert sign, environment checklist, posey/chair alarms and External hip protectors.

**Results:** There has been a 24 % reduction in falls in the MeDEL directorate since 2003, with a falls rate of 5.2 falls per 1,000 bed days. There has also been an 80 % reduction in hip fractures from 2005 to 2011.

**Discussion:** Our results suggest that our current falls management programme is effective and as a result of this success a hospital wide falls management programme has been rolled out in May 2012 by the Clinical Nurse Specialist in Falls Prevention. The cornerstone for this programme is education based, with weekly lectures on all aspects of falls and the falls management programme targeted to all hospital staff.



## P149

**Capacity Assessment of Older Participants in Randomised Controlled Trials (RCTs)**

Shane O'Hanlon, Margaret O'Connor, Declan Lyons

*University Hospital Limerick, Limerick, Ireland*

**Introduction:** The Declaration of Helsinki requires all research participants to give informed consent. Mental capacity is a necessary part of this process. It has been estimated that 63 % of nursing home residents do not have capacity to consent to participation in research.<sup>1</sup> Among hospitalised older patients, 40 % lack mental capacity.<sup>2</sup> This study aimed to review randomised controlled trials (RCTs) in 4 major journals to ascertain whether capacity assessment had been performed where older people were recruited.

**Methods:** A retrospective review was performed of the Journal of the American Geriatrics Society, British Medical Journal, Age and Ageing and the Lancet over a 6 month period from September 2011 to March 2012.

**Results:** of 99 RCTs published in the study period, 41 (41 %) did not recruit people over 65 years of age. A further 7 trials did not recruit participants individually (e.g cluster design). 4 trials did not publish the age profile of participants. Of 47 trials that included older participants, 37 (79 %) did not specify whether any underwent a capacity assessment. Only 1 trial described a mechanism for assessment of capacity of research participants (Evaluation to Sign Consent tool). 9 other trials used solutions such as surrogates or legal representatives where consent was not possible, but none specified on what basis this decision was made.

**Discussion:** Most RCTs do not indicate whether or how capacity of older participants is assessed. Given the increased incidence of incapacity in this vulnerable group, more attention should be paid to ensuring participants are properly assessed before recruitment. Ability to sign a consent form should not be the sole determinant. This study also confirms that that older people remain under-represented in published clinical research.

**References:**

- <sup>1</sup>Resnick B, Gruber-Baldini AL, Pretzer-Aboff I, et al (2007) Gerontologist 47(1):69–77
- <sup>2</sup>Raymont V, Bingley W, Buchanan A, et al (2004) Lancet 364(9443):1421–1427.

## P150

**Atrial Fibrillation Is Under Recognized and Inappropriately Treated in Older Adults: Cross-Sectional Findings from the Irish Longitudinal Study on Ageing (TILDA)**John Frewen<sup>1</sup>, Ciaran Finucane<sup>1</sup>, Hilary Cronin<sup>1</sup>, Ciara Rice<sup>2</sup>, Patricia Kearney<sup>1</sup>, Joseph Harbison<sup>2</sup>, Rose Anne Kenny<sup>1</sup><sup>1</sup>TILDA, Trinity College Dublin, Ireland, <sup>2</sup>St James' Hospital, Dublin, Ireland

**Introduction:** The aims of this study were to investigate the prevalence of objective and self-reported atrial fibrillation (AF), treatment rates of AF, and the factors underlying awareness and treatment of AF in a large nationally representative European based sample.

**Methods:** A nationally representative population sample of people aged 50 years and older, living in Ireland (sampling ratio 1:142) were

recruited as part of the TILDA study. 10 min ECG recordings were obtained from participants (4,890), and subsequently analysed to detect AF, using ESC criteria. Self-reported arrhythmias, along with other subjective and objective health measures (including CVD diseases, CHA2DS2-VASC variables, blood pressure) and medications were also recorded. All statistics were performed using Stata V12. Logistic regressions were used to determine associations with outcomes of AF, awareness and treatment.  $P < 0.05$  was assumed significant.

**Results:** Overall prevalence of AF was 2.9 %, which increased with age, and was higher in men (4.7 vs. 1.2 %;  $p < 0.0001$ ). 67.8 % were at high risk of stroke (CHA2DS2-VASC  $> 2$ ), of which 40.7 % were adequately treated. CHA2DS2-VASC score was not associated with treatment (OR = 0.846;  $P = 0.11$ ), whereas frailty was associated with under-treatment (OR = 0.047;  $P = 0.046$ ). A high proportion, (38.1 %) were unaware of having AF, also independent of CHA2DS2-VASC score.

**Discussion:** In this European population based study, prevalence of AF was similar to previous reports. The high discrepancy between objective and subjectively defined AF however, has implications for the interpretation of self-reported AF, from other European based studies. The dissociation of CHA2DS2-VASC score with either awareness or treatment of AF highlights the need for increased implementation of ESC management guidelines.

## P151

**Prevalence of Depression in an Older Population with Syncope**Jaspreet Bhangu<sup>1</sup>, Bellinda King-Kallimanis<sup>2</sup>, Conal Cunningham<sup>1</sup>, Rose Anne Kenny<sup>2</sup><sup>1</sup>St. James's Hospital, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland

**Introduction:** Syncope is a common problem which increases in older age. In syncope clinics, patients who are depressed have higher rates of unexplained syncope and recurrent syncope. To date no population based study has looked at the incidence of syncope in community dwelling older populations and its relationship to depression. We aim to examine the rates of depression in older patients reporting syncope and the effect of anti-depressants on the rates of syncope.

**Methods:** Data was extracted from the Irish Longitudinal Study on Ageing (TILDA), which includes 8,175 adults aged 50 and older, living in the community in Ireland. The Centre for Epidemiological Studies Depression scale (CES-D) was used to assess levels of depression. Syncope was assessed by self reported questionnaires. Multinomial regression was used for statistical analysis with a  $p$  value of  $< 0.05$  determining significance.

**Results:** 8,175 participants aged 50 and older were assessed. 227 patients reported at least one syncopal episode in the last year. Patients with moderate and severe depression had a greater likelihood of syncope (RR 1.99 and 2.82, respectively  $p < 0.010$ ). When corrected for age and co-morbidities, depressed patients treated with tricyclic anti-depressants (TCAs) were more likely to have a syncopal episode in the last year (RR 2.25,  $p < 0.050$ ). In addition, these patients had a greater number of syncopal episodes in the preceding 12 months (RR 4.13,  $p < 0.050$ ). Patients on selective serotonin re-uptake inhibitors (SSRIs) also had a higher risk of syncope but this failed to reach statistical significance.

**Discussion:** This study demonstrates an increased risk of syncope in older patients with depression. Treatment with TCAs increases both the risk and frequency of syncope. As a cross sectional survey this study is not able to demonstrate causation and further work is warranted to investigate the underlying causes and risk factors for syncopal disorders in depression.

## P152

### A Fracture Liaison Service (FLS) in a Non-Regional Orthopaedic Fracture Clinic Respond to the First Fracture and Prevent the Second

M Elkider, J Quinlan, C Byrne, M Schwindt, P Cotter, R McGovern, E Ahern

*Lourdes Orthopaedic Hospital & Department of Geriatric Medicine, St. Luke's General Hospital, Kilkenny, Ireland*

**Introduction:** A prior fracture at any site is associated with a doubling of future fracture risk. An index fragility fracture is an opportunity to trigger secondary preventative assessment and intervention.

We provide a Fracture Liaison Service (FLS) in a Non-Regional Fracture Clinic. It is based on the SouthTipperaryGH model. Existing Orthopaedic nurses were re-trained to deliver this service.

It aims to detect fragility fractures and offer secondary fracture prevention. It is available to men and women over the age of 50 years with a fragility fracture. Patients are assessed by the FCN (Fracture Clinic Nurse). Demographics, weight, height, co-morbidities, medications, fracture type, risk factors are recorded. All have a full blood count, bioprofile, ESR, CRP, thyroid function test. Once results are available, patients are assessed by a Consultant.

**Methods:** Retrospective study of all patient records who attended with a fragility fracture from November 2010 to December 2012.

**Results:** Approx. 822 patients attended the fracture clinic. 35 (4.3 %) patients were identified to have fragility fractures. 2 declined (n = 33). Most were female (94 %). The mean age of females was 64 and males 75 years. 54.4 % (n = 18) had a previous fracture. 42 % (13) had at least one other fracture risk factor. Most were upper limb fractures (60 %). Only 15 patients (45.5 %) had a DXA; <sup>2</sup>/<sub>3</sub> demonstrated either osteopaenia or osteoporosis. 78.8 % (n = 26) had interventions documented. 9 (27 %) received lifestyle advice, 19 (57 %) were prescribed calcium and vitamin D supplementation and 15 % (5) had additional treatment prescribed (Biphosphonate (4) and Denosumab).

**Discussion:** Demographics, fracture type and risk factors are similar to other services and we identify those at risk of future fractures. In comparison to other services patients were under investigated and under treated and the current procedure is being reviewed to improve same.

## P153

### The Utility of Heel Ultrasound in Diagnosis of Osteoporosis in Colles Fracture and Its Correlation with DXA Scanning

Danny O'Hare, Jaspreet Bhangu, Niamh Adams, Neasa Fallon, E. Thornton, Miriam Casey, JB Walsh

*St James's Hospital, Dublin, Ireland*

**Introduction:** Quantitative Ultrasonography (QUS) measures the transmission of ultrasound through accessible limb bones. QUS of the calcaneus has been shown to be a useful predictor of hip fracture risk, but it's correlation with DXA scanning in colles fractures has not been established. We aim to examine the correlation between heel ultrasound and DXA scanning in a population of colles fractures for use in diagnosing osteoporosis.

**Methods:** Study design was a retrospective review of a colles fracture database maintained in a tertiary referral hospital specialist clinic. We included all age ranges (20–102 years). Heel ultrasound was performed by a radiographer using a standard t score derivation. DXA derived Hip T scores were obtained in the same cohort of patients. Statistical analysis was performed using SPSS software. Correlation was calculated using Pearson correlation co-efficient with a value of greater than 0.5 signifying strong correlation.

**Results:** In total 804 patients records were analysed. 615 had heel ultrasound and 455 had DXA and were included for correlation. Average Calcaneal ultrasound T score was −2.40, (CI −5.25 to +0.45). Average DXA Hip T score was −2.17 (CI −4.49 to +0.16). Pearson's product moment correlation co-efficient (PPMCC) between the two variables was calculated at 0.52, indicating a strong positive correlation.

**Discussion:** Heel ultrasound has a strong positive correlation with DXA scanning in patients who suffered a colles fracture. In the presence of a colles fracture, quantitative ultrasonography of the calcaneus may be considered as an alternative to DXA scanning for the diagnosis of osteoporosis.

## P154

### An Assessment of Secondary Workup for Osteoporosis in Women Attending an Open Access DXA Service

Grainne O'Malley<sup>1</sup>, Connor O'Leary<sup>1</sup>, Michael Ryan<sup>2</sup>, Sheila Carew<sup>1</sup>, Tina Sheehy<sup>1</sup>, Aine Costelloe<sup>1</sup>, Caroline Ryan<sup>1</sup>, Margaret O'Connor<sup>1</sup>, Declan Lyons<sup>1</sup>

<sup>1</sup>Department of Medicine, Division of Ageing and Therapeutics, Mid-Western Regional Hospital, Limerick, Ireland, <sup>2</sup>Department of Biochemistry, St. John's Hospital, Limerick, Ireland

**Introduction:** The WHO has defined osteoporosis based upon dual-energy x-ray absorptiometry (DEXA) measurements (Bone mineral density  $\geq 2.5$  standard deviations below the young adult reference range). The Z score represents the number of standard deviations from the mean bone density for an age and sex matched adult. It is well recognised that in those who have a Z-score of less than −2, which is below that expected for age, that this should prompt more careful scrutiny for a secondary cause. We provide an open access DEXA service which provides a report including guidance to review for secondary causes in patients with osteoporosis particularly if the Z-score is  $< -2$ .

**Methods:** From our DXA database, we performed a search for patients age 40–60 who had a T-score  $\leq -2.5$  and a Z-score  $\leq -2$ . These were referred by their General Practitioner (GP) from June 2000 to December 2011 with results of scans forwarded to the GP for assessment and treatment. We checked blood results for all patients on all local hospital laboratory databases.

**Results:** We identified 101 patients, average age 54. 3 patients had a full secondary work up and in all cases this occurred at least 2 years after the initial DEXA scan. 56 had a full blood count and electrolytes

assessed. 55 had thyroid function tests. 51 had liver tests. 26 had serum calcium measurements. 15 had phosphate checked. 3 had Vitamin D and PTH performed. 5 had coeliac serology tested. 5 had protein electrophoresis checked.

**Discussion:** This study shows that the majority of patients under 60 years with osteoporosis and low Z-scores identified by GP referral for DEXA did not have a secondary workup for osteoporosis. Improvements in GP education or automatic referral of these patients to a dedicated hospital outpatient need to be considered.

## P155

### Intra-Arterial Thrombectomy in a 86 Year Old Lady with Acute Ischaemic Stroke

AH Lavan<sup>1</sup>, SKK Lee<sup>1</sup>, P Brennan<sup>2</sup>, C Donegan<sup>1</sup>

<sup>1</sup>Department of Geriatric and Stroke Medicine, Beaumont Hospital, Dublin, Ireland, <sup>2</sup>Department of Radiology, Beaumont Hospital, Dublin, Ireland, <sup>3</sup>Royal College of Surgeons in Ireland, Dublin, Ireland

#### Background

**Introduction:** The limitations of intravenous (IV) thrombolysis has paved the way for the development of endovascular procedures in acute stroke. Safe recanalisation with intra arterial (IA) thrombectomy has been shown to be successful in 'The Mechanical Embolus Removal in Cerebral Ischaemia' (MERCi) trial. The oldest person in this trial was 84 years. There is a paucity of evidence regarding IA thrombectomy in those over 80 years. We present the case of an 86 year old who underwent successful IA thrombectomy.

**Methods:** An 86 year old female with a previous history of infarction, ischaemic heart disease, atrial fibrillation, hypertension and hypercholesterolaemia presented to our emergency department with a 70 min history of global aphasia.

**Results:** At presentation her Glasgow Coma Scale (GCS) was 14/15, BP 149/61, NIHSS 6. ECG was sinus rhythm. CT brain showed no acute infarction. CT angiography confirmed occlusive thrombus within the left internal carotid artery extending into the middle cerebral artery (MCA) and the proximal segment of the anterior cerebral artery. Bolus IV thrombolysis was given followed by IA thrombectomy. Successful recanalisation was achieved with clot retrieval using the trevo stent retriever. Follow up CT at 24 h revealed asymptomatic haemorrhagic transformation in a left MCA infarct. At this time National Institute of Health Stroke Scale (NIHSS) score was 0 and Modified Rankin Scale (mRS) was 1. CT scan at 5 days showed interval decrease in haemorrhage. Patient remained asymptomatic throughout and mRS remained 0 at 3 and 7 days post procedure.

**Discussion:** Irrespective of age patients should be offered all therapeutic interventions available if they are deemed suitable and fit for the procedure. This is the oldest patient to have undergone IA thrombectomy in our institution and to our knowledge in the country. With careful patient selection outcome can be extremely good.

## P156

### Patient Expectations of Medications Used for Secondary Prevention in Stroke

Rachel Mulpeter<sup>1</sup>, Rebecca Geary<sup>1</sup>, Joe Harbison<sup>1</sup>, Jaspreet Bhangu<sup>2</sup>

<sup>1</sup>Trinity College, Dublin, Ireland, <sup>2</sup>St. James's Hospital, Dublin, Ireland

**Introduction:** Cardiovascular disease prevention medications are amongst the most commonly prescribed drugs in Ireland. We aim to determine what level of effectiveness patients would expect from a hypothetical stroke preventative medication and whether potential drug side effects would affect this. We also assess compliance and concordance with their current medication to see if patient's views correlate with their actual behaviour.

**Methods:** Over a two-week period, information was obtained from elderly patients (>65 years) using a researcher-administered questionnaire. Information was gathered on demographics, compliance to medication, stroke history and current drug profile for stroke preventative medications. Data was analysed using the Statistical Package for the Social Sciences (SPSS). Results were reported as percentages and means. Chi square tests were used to calculate p values. A p value of <0.05 was seen as statistically significant.

**Results:** 84 patients from a mixture of outpatient clinics and day hospitals were interviewed (31 male; 53 female). Of the 84 subjects, 96 % were taking medications with a median of 6 tablets per day (Range 0–31). When asked about compliance, 63 (77 %) reported forgetting to take a dose of medication less than once a month while 9 (11 %) forgot to take a dose more than once a week. If asked to take a new tablet (49 %) would want at least a 30 % benefit in terms of prevention of further stroke. When asked the same question with the addition of common side effects including headache, fatigue and muscle cramps the level of effect increased, with at least 50 % of subjects seeking efficacy >30 %.

**Discussion:** In conclusion, most patients have an unrealistic view of the actual benefits of stroke medications and their desire to take these medications markedly diminishes when side effects are added in. It is important that patients are counselled adequately prior to commencing any preventative medication.

## P157

### Prescribing Practices Among Patients Admitted to an Irish Academic Teaching Hospital

AH Lavan<sup>1</sup>, OC Sheehan<sup>1</sup>, ÓM Dunne<sup>2</sup>, C Donegan<sup>1</sup>, DJP Williams<sup>1</sup>, A Moore<sup>1</sup>

<sup>1</sup>Department of Geriatric Medicine, Beaumont Hospital, Dublin, Ireland, <sup>2</sup>Royal College of Surgeons in Ireland, Dublin, Ireland

**Introduction:** The average number of medications prescribed per patient continues to rise. Generic prescribing is an important measure of prescribing quality. Improving prescribing quality helps reduce potential Adverse Drug Events (ADEs). The aim of this study was to evaluate the current prescribing practices, particularly generic prescribing, in our institution.

**Methods:** We analysed prescribing practices on four wards (two medical, two surgical) over a 24-h period. The number of prescribed items and the rate of generic prescribing were analysed. We defined a high risk medication as a medication that bore a heightened risk of causing significant harm when used in error.<sup>1</sup> High risk medications studied included cytotoxics, opiates, warfarin, insulin, steroids and electrolytes.

**Results:** The prescription charts of 133 patients were studied (49.6 % male, 52.6 % medical). 99 (74.4 %) were aged over 65 years. Mean number of prescriptions per patient was 13.8 (SD 5.5). Allergy status was documented in 130 patients (97.7 %). 54.9 % (n = 73) of patients were on at least one high risk medication (mean 0.9, SD1.2)

with 71.2 % of these (n = 52)  $\geq 65$  years of age. 49.6 % (n = 66) were on  $\geq 1$  opioid with 71.2 % of these (n = 47)  $\geq 65$  years of age. Mean number of regular, stat and ‘as required’ medications per patient were 10.1 (SD 4.8), 0.8 (SD 1.6), 2.9 (SD 1.8) respectively. The total rate of generic prescribing was 60.9 % (1,121/1,841). The rates of generic prescribing were highest in medications prescribed as regular prescriptions versus ‘as required’ medications (62.6 vs. 54.7 % p = 0.02). Generic prescribing was more common in medical than surgical patients (9.2 prescriptions vs. 7.6, p = 0.04).

**Discussion:** The rates of generic prescribing were sub-optimal in our population. We are currently implementing an education program to increase awareness of polypharmacy, generic prescribing and ADEs in our population.

**Reference:**

<sup>1</sup>Institution for Safe Medication Practices.

## P158

### Timing of Death from Stroke

Imelda Noone, Serena Hatton, Barbara Whyte, Diarmuid O’Shea, Morgan Crowe

*St. Vincent’s University Hospital, Dublin, Ireland*

**Introduction:** Despite advances in stroke care, mortality remains substantial, probably reflecting an increasingly very elderly population. One of the major challenges in end of life care for stroke patients is defining when a gravely ill patient (who may benefit from rehabilitation, medication and tube feeding) becomes a dying patient, where palliative measures including the Liverpool Care Pathway maybe more appropriate. Such decisions are complicated by uncertainty over patients wishes and difficulty in reconciling family concerns which become more complex in very disabled patients who survive the very early stages of stroke.

**Methods:** With a view to planning end of life services and having more informed discussions with family members, we examined our experience of timing of death in patients hospitalised with acute stroke in our hospital.

**Results:** In prospectively gathered data, 48 patients died following acute stroke in 2011 representing 14.2 % of our total strokes with 34 (70 %) being female. 11 (23 %) were  $\geq 90$  years, 21 (44 %) were 80–89, 11 (23 %) were 70–79 years and 5 (10 %)  $< 70$  years. The majority of deaths, 36 (75 %) died within 14 days following their stroke (54 % in 7 days, 20 % in 14 days) with the remaining deaths occurred within 8 weeks. Review of case notes revealed that the majority of patients were designated as dying in their last 3 days. Palliative care services were consulted in 23 % of cases.

**Discussion:** Most patients who die following stroke in our hospital are very elderly. Most deaths (75 %) occur within 2 weeks, but the remainder who survive the early stages are very disabled and may present complex end of life care issues. Palliative care services were consulted in a minority of cases. Palliation can be a complex phase of care and requires careful consideration, service planning and evaluation.

## P159

### Analysis of the Emergency Department Boarders Overnight in a Tertiary Teaching Hospital

Liam Healy<sup>1</sup>, Mike O’Connor<sup>2</sup>, Colm Henry<sup>1</sup>, Suzanne Timmons<sup>1</sup>

<sup>1</sup>Mercy University Hospital, Cork, Ireland, <sup>2</sup>Cork University Hospital, Cork, Ireland

**Introduction:** Emergency department (ED) boarders—patients who have been admitted to the hospital system, but remain on a trolley in the ED—are a feature of many large busy hospitals. Different hospitals have different practices as to how these patients are coded using the Hospital In-Patient Enquiry (HIPE) System.

**Methods:** We retrospectively analysed the HIPE system for a 6 month period from January to July in a large tertiary hospital to identify those patients that had been admitted medically or surgically but subsequently completed their in-hospital stay on a trolley in the ED before being discharged home. Patient cost analysis was performed on a 2 month sample (January and February) of those patients (228).

**Results:** During this time, 804 admitted patients completed their in-hospital stay on a trolley in the ED before being discharged home. A significant proportion of these were over the age of 65 (N = 246, 30.5 %). 77 of these people were over 80 (9.5 %), with the oldest ED trolley patient being 95 years old. Weekends saw the fewest ED overnight boarders, probably a reflection of reduced ED attendances at weekends. 21 % of patients had private health insurance (N = 170). 17.8 % (N = 143) were general medical patients, 17.1 % (N = 138), general surgical. The most common medical specialities represented were cardiology at 14.7 % (N = 118) and neurology at 11.6 % (N = 93). The hospital was remunerated by €685,111 for the 228 patients analysed for the months of January and February, with an average patient remuneration of approximately €3,000.

**Results:** It is important that the HIPE data codes accurately the significant number of patients who are admitted but subsequently discharged home having completed their hospital stay as an ED boarder on a trolley. This HIPE coding is not standardised across all hospitals resulting in potentially significant lost revenue for hospitals that code these patients incorrectly.

## P160

### Evaluation of the Community Liaison Nursing Home Outreach Service in a Dublin Teaching Hospital 2009 to 2011

Mary Martin, Kit Mun Tan, Orla Collins, Graham Hughes, Diarmuid O’Shea

*St Vincents University Hospital, Dublin 4, Ireland*

**Introduction:** Consultant geriatricians in this tertiary hospital provide an outreach service to nursing home residents in the catchment area since November 2009. This new service was analysed by reviewing source and reason for referrals and the interventions undertaken in its initial 2 year period. The aim is to help with future service planning.

**Methods:** I gathered the names of patients seen from the local L drive schedule. I used this list to trace the general practitioner (GP) letters following first appointment on the department database (TA drive) for the relevant information. Patients with Parkinson’s Disease were not included as they have automatic annual reviews.

**Results:** Results were documented for 148 patients. The largest number of referrals was made on discharge either from the in-reach nursing home liaison service or other consultants. Of the GP referrals, the main reason for referral was cognitive/behavioural problems (24 %) followed by general medical complaints (16 % pain, “general medical review”), falls/reduced mobility (10 %), poor oral intake/



weight loss (9 %), and finally EPOA and medication queries (both 4 %). The main interventions were changes to medications (64 %) followed by formulating a new diagnosis (34 %). Further medical workup and advanced care planning was done in 18 % of cases. Dementia (41 %) was the most common diagnosis made. Referral to other specialties was recommended for 22 patients; mostly psychiatry and palliative care. Medications were either increased or added on 66 (45 %) occasions while 72 patients (49 %) had medications either reduced or stopped. Discussions with relatives were documented in 32 (22 %) cases.

**Discussion:** Defining the impact of this service will be possible in the future by knowing what services are currently being provided. It will also inform discussions with the primary care provider and the nursing homes. Cognitive and behavioural difficulties are the main reason for referral to the geriatrician, the need for further referral and the modification of medication.

## P161

### Utility of Online Referral Systems for Medical Gerontology

Liz Mc Carron, Jaspreet Bhangu, David Robinson

*St. James's Hospital, Dublin, Ireland*

**Introduction:** It is estimated that over 80 % of general practices in Ireland are computerised. Despite this the main mode of referral to gerontology services in our institution is via faxed or posted letter. A National Electronic Referral System has been created for cancer services in the Health Service Executive in collaboration with the Irish College of General Practitioners (ICGP). The aim of this study was to assess general practitioners (GPs) attitudes towards electronic systems and their perceived need of electronic referrals for Gerontology.

**Methods:** Evaluation was by means of a postal questionnaire. This self administered questionnaire contained eight questions and was sent to GPs in the local catchment area of our institution.

**Results:** In total 115 GPs were included. 50 GPs (43.5 %) responded to the questionnaire. Of the respondents 26 sent more than one referral to Gerontology per month with 15 sending at least one referral per week. 25 of the practices already use an online referral service with 21 having described a positive experience with online referrals. The majority of respondents (40) would prefer an online referral system for gerontology.

**Discussion:** The results of this study reveal that there is an impetus for change to an online referral system. The majority of GPs had responded that they had good experiences with using online referrals already and would like to use them in the future. Further work could focus on the format and impact this would have on waiting lists for patients referred from the community.

## P162

### Irish Public Knowledge of Stroke is Poor Especially in High Risk Groups Including Older Adults, Urban Dwellers and Lower Socioeconomic Classes

Stephanie Robinson, Ruth Dwyer, Tara Coughlan, Desmond O'Neill, Ronan Collins

*Department of Stroke Medicine, Adelaide and Meath Hospital, Dublin, Ireland*

**Introduction:** Acute stroke care in Ireland has changed dramatically over the past decade with the introduction of acute stroke units, thrombolysis and telemedicine services, and, more recently interventional neuroradiology techniques. Stroke is a potentially preventable and treatable disease, through identification and control of risk factors, urgent therapies and good multidisciplinary rehabilitation. A key component to timely interventions is the recognition and response to acute signs and symptoms by the general public.

**Methods:** An MRBI/IPSOS survey of 1,000 randomly selected individuals was carried out in the Dublin/Mid Leinster area, representative of the Irish population. All participants were interviewed in person by a questionnaire to assess knowledge of acute stroke signs and symptoms, personal experience of stroke and stroke risk factors.

**Results:** More than half of the sampled cohort was unable to describe common stroke symptoms. Those most frequently mentioned were, weakness (42 %), slurred speech (29 %), dizziness (17 %) and difficulty understanding (14 %). Factors associated with poorest awareness included age >65 years, urban dwelling and male sex. In response to an acute stroke 58 % of respondents indicated that they would call an ambulance, 5 % indicated that they would “wait and see” and a further 5 % stated they didn't know. On open ended questioning, less than half were able to identify any established risk factor for stroke. The most common suggested were smoking (46 %), hypertension (37 %), stress (33 %), over-weight (31 %) and lack of exercise (23 %).

**Discussion:** This study identified significant deficits in the recognition of common stroke symptoms and signs. There is widespread lack of awareness of stroke risk factors in the general population. Stroke awareness showed statistically significant differences among demographic groups such as older versus younger, urban versus rural and among socioeconomic classes. Public health education needs to specifically target stroke awareness, focusing on high-risk groups to facilitate timely interventions and improved patient outcomes.

## P163

### Thinking About Resuscitation Status

Rebecca Lee, Emma Phelan

*Cork University Hospital, Cork, Ireland*

**Introduction:** ‘Do not resuscitate’ (DNR) orders are becoming more commonplace in clinical medicine. This study aimed to measure the prevalence of DNR orders and their documentation.

**Methods:** This cross-sectional study was carried out on a single day and included all 35 inpatients on a medical ward in a tertiary referral hospital. Data were collected from both medical and nursing notes.

**Results:** The mean age of all patients was 75.4 years. 22 patients were under the care of the geriatric service and 13 were general medical patients. The median Barthel Index score (on day of survey) was 11 (interquartile range 1–18). 26 patients were ‘for resuscitation’ and the Barthel index for this group ranged between 1 and 20 (median 14, interquartile range 9–19). In all 9 patients who were NFR, the Barthel index was 5 or lower (median score 0, interquartile range 0–1). A Mann–Whitney test revealed that the difference in Barthel scores between the two groups was significant ( $p = <0.001$ ). Of note, 5 patients in the ‘for resuscitation’ group had a Barthel score <5. NFR status was documented by the consultant responsible for the patients

care in 3 cases, by the registrar in 4 cases, by the SHO in 1 case and by nursing staff in 1 case.

**Discussion:** A Barthel index less than 8 has been associated with frailty, and frailty has been associated with comorbidity and mortality. All nine patients who were NFR fell into this category. However five patients in the ‘for resuscitation’ groups also fell within this category, but no discussion regarding resuscitation status had been documented. For the patients who were NFR, the decision seemed appropriate. However, the other patients with a Barthel score of 8 or less may have warranted formal discussion regarding resuscitation status.

## P164

### Assessment of End of Life Care (EOLC) Outcomes in an Irish Nursing Home Population Using a Modified Version of the Physician Orders for Life-Sustaining Treatment (POLST) Tool

Josephine Soh<sup>1</sup>, Lelane VanDer Poel<sup>1</sup>, Regina McQuillan<sup>2</sup>, Siobhan M Kennelly<sup>1</sup>

<sup>1</sup>Department Medicine for the Elderly, Connolly Hospital, Dublin, Ireland, <sup>2</sup>St Francis Hospice, Dublin, Ireland

**Introduction:** The POLST tool expands beyond the traditional ‘Do Not Resuscitate’ orders to include a range of life sustaining treatments including decision re hospital transfer, antibiotics, fluids and nutritional support. We introduced a modified version of Physician Orders for Life-Sustaining Treatment (POLST) (including anticipatory prescribing advice for end of life pain and symptom control) for use in our outreach service to nursing homes and assessed outcomes.

**Methods:** Data collected prospectively from Jan to Dec 2011 on patients in nursing homes where modified POLST tool was used to reflect discussions on end of life care (EOLC).

**Results:** Modified POLST documented in 60 residents (mean age 85, F:M 3:1). All residents had comprehensive geriatric assessment with consultant geriatrician; 85 % (n = 51) were referred for assessment in nursing home with others seen during hospitalization (n = 9). Discussions took place with families/designated carer in all cases (4 residents participated in discussion). 87 % (n = 54) requested provision of comfort care in nursing home at end of life; 10 % (n = 6) were appropriate for/requested hospital transfer for iv antibiotic treatment. 91 % (n = 55) had a diagnosis of advanced dementia; mean Barthel score <sup>2</sup>/<sub>20</sub>. There were 28 deaths in the cohort (46 %); 96 % (n = 27) of the deaths occurred in the nursing home; mean time of 11 weeks between plan documentation and death. Prescribing patterns for last 48 h included per oral antibiotics in 50 % (n = 14), opiates in 25 % (n = 7) and subcutaneous fluids 35 % (n = 9).

**Discussion:** The use of modified POLST tool with appropriate assessment and discussion can enable care provision for the very frail at the end of life in the nursing home.

## P165

### Vision, Falls and Fear of Falling in an Older Irish Population: Findings from the Irish Longitudinal Study on Ageing (TILDA)

Eoin Duggan<sup>1</sup>, Ciaran Finucane<sup>3</sup>, Hilary Cronin<sup>1</sup>, James Loughman<sup>2</sup>, Rose Anne Kenny<sup>1</sup>

<sup>1</sup>The Irish Longitudinal Study on Ageing, Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Department of Ophthalmology, Dublin Institute of Technology Kevin St., Dublin, Ireland, <sup>3</sup>Department of Medical Physics, St James's Hospital, Dublin, Ireland

**Introduction:** Falls are a serious health concern for older people and a major health care cost. Fear of falling is a strong risk factor for falls. The relative role of vision in falls and fear of falling is still a matter of debate. The aim of this study was to determine if impaired visual acuity or contrast sensitivity is significantly associated with a history of falls and/or fear of falling in older adults.

**Methods:** N = 4,914 individuals were recruited as part of The Irish Longitudinal Study on Ageing (TILDA). In the TILDA health assessment both visual acuity and contrast sensitivity were measured. Participants were also asked about their history of falls and fear of falling in the interview. Logistic regression was performed to control for the effect of confounding variables. P was assumed significant at P < 0.05.

**Results:** Visual Acuity was not significantly different between fallers and non-fallers (0.05 vs. 0.06 LogMAR; p = 0.54). There was no significant difference in contrast sensitivity between fallers and non-fallers. Those with a fear of falling had significantly lower contrast scores (P < 0.001). Following multivariate analysis age and gender were found to account for this difference.

**Discussion:** Falls are a multifactorial and heterogeneous health issue in older people. Traditionally eyesight has been considered a risk factor for falls. Our results would suggest that single interventions are unlikely to reduce falls alone and individually tailored interventions are likely to be most effective in reducing falls. It was found that fear of falling is three times more common in women than men in the older Irish population. Research to investigate why this is the case and therapies to alleviate this are necessary.

## P166

### Ruptured Dermoid Cyst: An Unusual Cause of Delirium

Niamh O'Donoghue<sup>1</sup>, Niamh O'Regan<sup>2</sup>, Kieran Anthony O'Connor<sup>1</sup>

<sup>1</sup>Mercy University Hospital, Cork, Ireland, <sup>2</sup>Centre for Gerontology and Rehabilitation, University College Cork, Cork, Ireland

**Introduction:** Dermoid cysts are derived from ectopic cell remnants that are retained during closure of the neural tube. Intracranial dermoids are rare congenital lesions that account for <1 % of all intracranial tumours. The purpose of this review is to illustrate a case of delirium from a ruptured dermoid cyst and to highlight the broad and sometimes unusual aetiological possibilities for delirium, a ubiquitous condition in our hospitals.

**Case:** A case of a 78-year-old woman presented with an acute short-lived headache followed by worsening but fluctuating confusion 2 weeks prior to admission. In the days prior to admission her family had witnessed blank staring episodes. On examination, she was slightly ataxic, but with no other focal neurological signs. A CT brain scan showed several low attenuation areas within the CSF spaces of fat density. MRI brain confirmed the presence of several small fat droplets in the CSF spaces.

**Results:** Rupture of an intracranial dermoid produces a dramatic & characteristic MR and CT appearance. The presence of disseminated fat droplets in the CSF spaces on neuroimaging is considered diagnostic for a ruptured dermoid cyst. We present her neuroradiology

images. We discuss her clinical course & the pathophysiological mechanisms for delirium.

Our patient's sudden headache is a recognised feature of a ruptured dermoid cyst. Her delirium and possible non-convulsive seizures are unusual but recognised presentations of this rare condition. These symptoms are probably due to chemical meningitis resulting from rupture of the cyst with fat leakage into the CSF. A ruptured dermoid cyst causing chemical meningitis is very atypical and uncommon in this age group. The mean age for presentation with headache in one series was  $23.5 \pm 9.3$  years. Our patient was managed conservatively, her delirium settled over 2 weeks and she was discharged home.

## P167

### Access To Primary Care in the Nursing Home: A Survey of Irish Directors of Nursing

Sinead Morrissey<sup>1</sup>, Rita Gallagher<sup>2</sup>, SiobhanM Kennelly<sup>3</sup>

<sup>1</sup>Nursing Homes Ireland, Dublin, Ireland, <sup>2</sup>Nursing Homes Nurse Projects, Dublin, Ireland, <sup>3</sup>Connolly Hospital, Dublin, Ireland

**Introduction:** Access to primary care has been an area of debate in the nursing home sector historically. The Irish National Audit of Stroke Care previously identified poor levels of multidisciplinary support for stroke patients in the nursing home setting. This survey sought to ascertain the level of primary care input in Irish nursing homes by General Practitioners and allied health services provided by the HSE.

**Methods:** This was a short survey (12 questions; 11 multiple choice, 1 narrative response) distributed in February and March 2012 to all private and voluntary nursing homes ( $n = 447$ ) electronically using a link to Survey Monkey<sup>®</sup> by email using the Nursing Homes Ireland (NHI) and Nursing Homes Nurse Projects (NHNP) database.

**Results:** 102 responses were received (21.9 % of total private and voluntary nursing homes on database). There were 4 responses from public nursing homes with majority (89.2 %;  $n = 91$ ) from private NH. Almost half of respondents ( $n = 50$ ; 49 %) had between 50 and 100 registered beds with 43.1 % ( $n = 44$ ) responding that they were serviced by more than six general practitioners (GPs); 45.1 % reporting one scheduled weekly GP visit. 10.8 % ( $n = 11$ ) had more than 4 'out-of-hours'/on-call GP visits to the NH in the last fortnight with 29.4 % ( $n = 30$ ) residents reviewed transferred to hospital by on-call GP. 65.7 % ( $n = 67$ ) of directors of nursing were satisfied with level of care provided by the GP in the nursing home. Access to on-site allied health services via the Health Services Executive was available for Physiotherapy (10.8 %); Occupational therapy (15.7 %); Speech and Language (24.5 %); Dietician (17.6 %) and Tissue Viability (13.7 %).

**Discussion:** Despite the low response rate this brief national survey highlights the variation between services with limited access to on-site allied health services in Irish nursing homes. Further research which ascertains the views of residents, GPs and allied health care staff is required.

## P168

### Increased Levels of Alcohol Intake are Associated with Atrial Fibrillation in Ireland

John Frewen<sup>1</sup>, Hilary Cronin<sup>1</sup>, Patricia Kearney<sup>3</sup>, Joseph Harbison<sup>2</sup>, Rose Anne Kenny<sup>1</sup>, Ciaran Finucane<sup>1</sup>

<sup>1</sup>TILDA, Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Department of Medical Gerontology, St. James's Hospital, Dublin, Ireland, <sup>3</sup>Department of Medicine, University College Cork, Dublin, Ireland

**Introduction:** Atrial Fibrillation (AF) is associated with increased risk of stroke. Behavioural lifestyle factors including high levels of alcohol intake are known to play a role in AF. According to recent evidence Ireland has the one of the highest alcohol consumption patterns in Europe. We hypothesized that increased levels of alcohol intake would be associated with AF.

**Methodology:** Participants were recruited using the updated RAN-SAM system as part of the TILDA study. Ten-minute resting ECG records were screened by 2 clinicians independently for persistent AF according to ESC guidelines. Frequency of alcohol consumption and quantity of alcohol consumed within the preceding 6 months was recorded. Respondents completed the CAGE (cut-annoyed-guilty-eye) questionnaire. Comparisons were made using Chi-squared statistics, and ANOVA. Logistic regression was used where appropriate. Significance was assumed at  $P < 0.05$ .

**Results:** 5,122 subjects underwent ECG recording of whom 4,882 were  $>49$  years [Mean 61 years (SD 8.8)]. 48 % were male. 118 subjects (2.4 %) were in AF on ECG. Univariate analysis indicates that those with AF drink more per week (2.2 (1.5) vs. 1.5 (1.5);  $P < 0.003$ ), drink more standard drinks per week (5.7 (3) vs. 10.4 (3);  $P < 0.0002$ ). When we controlled for confounding variables (age, gender, education) these trends remained. Factors independently associated with AF included the number of alcohol units consumed weekly (OR: 1.15 (1.0–1.3);  $P < 0.01$ ) and the frequency of alcohol consumption weekly (OR: 1.01 (1.0–1.3);  $P < 0.001$ ). The CAGE scoring system for reporting alcohol problems was significantly associated with AF at the 95 % confidence level (OR: 1.8 (1.0–3.2);  $p < 0.048$ ).

**Discussion:** Stroke risk associated with AF may be higher in the Irish population due to increased levels of alcohol intake combined with other factors including missed diagnosis, under utilisation of anticoagulation in subjects at cardio-embolic risk and over utilisation of anticoagulation in those at low risk defined by CHA2DS2-VASc score.

## P169

### Orthostatic Blood Pressure Decay Measured with Finometer Technology Cannot be Used to Predict Participants' Subjective Assessment of Health Status: The Health Inequalities and Ageing in the Community Evaluation (HIACE) Study

John Cooke<sup>1</sup>, Sheila Carew<sup>1</sup>, Eileen Humphries<sup>4</sup>, Caroline O'Connor<sup>1</sup>, Caroline Ryan<sup>1</sup>, Jean Saunders<sup>3</sup>, Margaret O'Connor<sup>1</sup>, David Clinch<sup>1</sup>, Paul Finucane<sup>2</sup>, Stiofain deBurca<sup>4</sup>, Declan Lyons<sup>1</sup>

<sup>1</sup>Department of Ageing and Therapeutics, Mid-Western Regional Hospital, Limerick, Ireland, <sup>2</sup>Graduate Entry Medical School, University of Limerick, Limerick, Ireland, <sup>3</sup>Statistical Consulting Unit, University of Limerick, Limerick, Ireland, <sup>4</sup>Department of Sociology, University of Limerick, Limerick, Ireland

**Introduction:** There are myriad symptoms attributed to orthostatic hypotension (OH). Finometer technology identifies significant orthostatic BP decay in a large proportion of community-dwelling older adults. Our objective was to determine if OH diagnosed in this manner is associated with adverse health effects.

**Methods:** This was a cross-sectional study of community-dwelling adults  $\geq 65$ . Significant cognitive impairment was the only exclusion. Short-Form 36 questionnaire was administered as a subjective measure of participants' health. All underwent a 3-min head-up tilt with Finometer monitoring. OH was diagnosed using 20/10 criteria. BP decays were further classified into; arteriolar and venular subtypes/morphological clustering/calculation of slope of BP decay/calculation of percentage recovery/time spent within criterion BP/symptomatology. Due to skew distributions, nonparametric tests were used for univariate modelling. Hierarchical and standard multiple regression techniques were used to predict changes in Physical (PCS) and Mental (MCS) health summary scores.

**Results:** 350 individuals underwent assessment. 24 Finometer traces were excluded due to poor quality. The median (IQR) age was 73 (70–78) years. The median Barthel score was 20 (20–20) and Mini Mental State Exam (MMSE) was 30 (30–30). 10 % reported a fall in the preceding 12 months. P-values for univariate models were adjusted for multiple comparisons to  $<0.005$ . 0 of the SF-36 scores were significantly different in OH versus controls. Univariate modelling of the subclassified BP decays did not reveal significant variation. Hierarchical regression models for PCS & MCS summary scores revealed  $\Delta R^2$  of 0.013 ( $p = 0.109$ ) and 0.008 ( $p = 0.335$ ) respectively when OH status was added to the model. Further multiple regression models of OH subtypes did not identify significant predictors of PCS or MCS.

**Discussion:** OH is known to have an adverse effect on quality of life in dysautonomia. Our work would suggest, however, that orthostatic BP decays identified using Finometer technology in otherwise healthy patients is not significantly adversely associated with subjective physical or mental health status; other parameters were better predictors.

## P170

### Management of Bone Health in Patients on Aromatase Inhibitors: Need for Defined Treatment Strategies

Yvelynne Kelly, Jude Ryan, Catherine Peters, Aine Costelloe, Christine Sheehy, Sheila Carew, Margaret O'Connor, Declan Lyons

University Hospital, Limerick, Ireland

**Introduction:** The incidence of breast cancer is increasing worldwide. Aromatase inhibitors (AIs) accelerate bone loss and are increasingly being used in the treatment of such patients. No consensus is yet available with regard to management of bone health in patients treated with AIs. The National Comprehensive Cancer Network Task Force Report (2009) suggests that intervention strategies for osteoporosis should be individualised for patients on AIs, with drug therapy reserved for those at greatest risk.

**Methods:** The aim of this study was to review the bone health management of hormone-responsive breast cancer patients in a large university teaching hospital over the past 10 years. Patients were identified from the breast cancer database. Those who had undergone two or more DEXA scans during their treatment were selected for enrolment in this study.

**Results:** 107 patients with hormone-sensitive breast cancer underwent two or more DEXA scans during the 10 year period. Of these, 75 patients were treated with AIs. 8 (11 %) were treated with both calcium/Vitamin D supplementation and anti-resorptive therapy. 16 (22 %) were not on any treatment. 45 (60 %) were treated with calcium/Vitamin D supplementation alone. Of those on both anti-resorptive therapy and calcium/Vitamin D supplementation, their

annual percentage change at lumbar spine was 2.64 %. In contrast, the percentage change for those on no treatment was  $-0.04$  %. Surprisingly the percentage change for those on calcium/Vitamin D supplementation alone was  $-0.95$  %.

**Discussion:** Worsening serial DEXA results in patients on calcium/Vitamin D supplementation alone may be due to a lack of clear guidance as to most appropriate time to commence treatment. Regional or national guidelines are required to try improve bone health in this at risk group of patients. Further research should evaluate the effect of AIs on bone loss as compared to healthy age- and sex-matched controls.

## P171

### The Impact of Environmental Modifications and Patient Cohorting with Supervision on Rate of Falls in Inpatients Over 65 Years Old

Valerie Lim, Isweri Pillay, John Cooke, Margaret Molony

South Tipperary General Hospital, Clonmel, Co Tipperary, Ireland

**Introduction:** In-hospital falls occur as often as 3–14 patients per 1,000 occupied bed days with increased risk of falls with age. These incidences have negative effects on patients and healthcare costs. Our aim was to observe the impact of environmental changes (1. lower bed heights, 2. toilet grab-rails, 3. raised toilet seats, 4. changing locations of light switches and 5. supervision of patients with high falls risk in cohorts) on rate of falls in two medical wards in an acute 284 bed hospital.

**Methods:** The trend of falls rates following the above environmental modifications made based on an audit on falls and assessment of causes of falls in 2005 were observed from 2007 to 2011. Falls rates were calculated prospectively based on the STARSweb reporting mechanism. (Falls per 1,000 occupied bed days = Number of falls a year divided by Total inpatient bed days for that year multiplied by 1,000).

**Results:** The baseline falls rate in 2005 was 3.85 per 1,000 occupied bed days. There was an initial rise to 8.18 in 2007 followed by a reduction to 4.68 in 2008. This evened out to 5.5 in 2009, 5.98 in 2010 and 5.5 in 2011. Regarding the degrees of harm, patients who sustained no harm remained similar in all years between 75.5 and 81.7 %, however there was a decrement in rates of low harm from 2005, 20.9 % compared to 9.2–18.1 % in the subsequent years. In contrast, there was an increase in moderate degrees of harm from 2005 from 0.24 % to 5.1–10.3 %. While there were no patients who sustained severe harm from falls in these wards in 2007, 2009 and 2010, the rates in 2005, 2008 and 2011 were 0.24, 0.92 and 1.06 respectively.

**Discussion:** Environmental changes with patient cohorting with supervision failed to change the falls rate in an acute medical ward setting.

## P172

### Hemodynamic Changes in Patients with Osteoporosis: Postural Hypotension as a Risk Factor for Hip Fracture

Gasim Ahmed, Tina Sheehy, Aine Costelloe, Shala Carew, Jude Ryan, Cathrine Peters, Margeret O Connor, Declan Lyons



University Hospital Limerick, Limerick, Ireland

**Introduction:** Fracture of the hip is one of the most common, devastating, and feared medical crises of older persons, threatening both survival and independence. Osteoporosis is regarded as significant underlying cause to hip fractures with postural hypotension acting as a trigger. The aim of this study is to measure the prevalence of postural hypotension in osteoporotic patients with hip fracture.

**Methods:** 156 patients attending the Clinical Age Assessment Unit (CAAU), University Hospital, Limerick with documented hip fracture were included in the study. Patients with osteoporosis on DEXA scanning and postural hypotension on head-up tilt testing were identified.

**Results:** Out of the 156 patients with hip fracture, 83 patients had DEXA scanning and 46 patients were osteoporotic. Within the same study group, 47 patients were fit for head-up tilt testing with 15 patients developed postural hypotension. 9 patients with postural hypotension in the study group had a co-existing osteoporosis.

**Discussion:** The prevalence of osteoporosis in patients with hip fracture was 29.5 %. The prevalence of postural hypotension in the same group was 9.6 %. The prevalence of postural hypotension among patient with osteoporosis was 19.6 %.

## P173

### The Influence of Healthcare Professional's Confidence and Training in Palliative Care and Treatment Choices at the End-of-Life

Ciara McGlade<sup>1</sup>, Suzanne Timmons<sup>1</sup>, Alice Coffey<sup>2</sup>, Elizabeth Weathers<sup>2</sup>, George Pope<sup>3</sup>, Caitriona Goggin<sup>4</sup>, Willie Molloy<sup>1</sup>

<sup>1</sup>Centre for Gerontology and Rehabilitation, University College Cork, Cork, Ireland, <sup>2</sup>Catherin McAuley School of Nursing and Midwifery, University College Cork, Cork, Ireland, <sup>3</sup>John Radcliffe Hospitals, Oxford, UK, <sup>4</sup>School of Medicine, University College Cork, Cork, Ireland

**Introduction:** Knowledge of palliative care is important to healthcare professionals (HCP) as most will be involved in caring for dying patients. End-of-life care can be challenging for HCPs, particularly if it involves making medical decisions for patients who have become incompetent. This study examined HCP's comfort and confidence in providing end-of-life care and how this might affect decision making at the end-of-life.

**Methods:** Using convenience sampling in Ireland, UK and Canada, 959 healthcare professionals (n = 709) and students (n = 250) were surveyed. An anonymous questionnaire evaluated respondents' comfort in dealing with dying patients and their families, confidence in treating symptoms, adjusting medications, and satisfaction with training in end-of-life care. It also explored their preferred treatment approach for life threatening illness in advanced dementia.

**Results:** Students were more likely than HCPs to feel uncomfortable with dying patients (OR = 3.32; 95 % CI 2.22–4.95, p < 0.0001). HCPs were more likely to feel uncomfortable if they were male (OR = 1.63; 95 % CI 0.98–2.72, p = 0.06), aged <30 years (OR = 1.85; 95 % CI 1.08–3.18, p = 0.03), or if ≤40 % of their patients were elderly (OR = 2.87; 95 % CI 1.72–4.79, p = 0.0001). HCPs who felt satisfied with their training in end-of-life care (46 % of HCPs), were more likely to feel comfortable providing end-of-life care (OR = 14.12; 95 % CI 6.54–30.48, p < 0.0001), stopping medications (OR = 7.72; 95 % CI 4.18–14.26, p < 0.0001), were less intensive in their treatment approaches and less likely to initiate

cardiopulmonary resuscitation in advanced dementia (OR = 1.77; 95 % CI 1.25–2.51, p = 0.0013).

**Discussion:** Factors contributing to comfort in caring for the dying are myriad, but important. Confidence in providing care for the dying, and satisfaction with knowledge and training in end-of-life care affect treatment choices, and the intensity (appropriate or not) with which patients are treated in their last days and weeks. Providing good training in end-of-life care to all HCPs is highly important.

## P174

### Prevalence of Vitamin D Deficiency and Its Relationship to DEXA Scan Results in Patients Presenting with a Neck of Femur Fracture

Elaine Shanahan, Jude Ryan, Audrey Butler, Sheila Carew, Tina Sheehy, Aine Costelloe, Brian Lenehan, Catherine Peters, Margaret O Connor, Declan Lyons

Mid-Western Regional Hospital, Limerick, Ireland

**Introduction:** Vitamin D is essential for the regulation of serum calcium levels and the normal mineralisation of bones. We analysed the vitamin D levels and DEXA scan results of patients admitted with a neck of femur fracture over an 8 month period.

**Methods:** All patients admitted with a neck of femur fracture were offered bone health investigation by a newly established fracture liaison service. Serum 25-hydroxyvitamin D [25-(OH)D] levels were taken and a DEXA scan was carried out. Vitamin D levels were analysed according to patient age, gender and DEXA scan results.

**Results:** 155 patients were admitted with a neck of femur fracture, 111 were female and 44 were male. The mean patient age was 78 (53–99) years. 135 patients had 25-(OH)D levels taken and 82 had DEXA scans. The median 25-(OH)D level was 24 nmol/l (75–200). 97.8 % of patients were vitamin D deficient. There was no significant difference in median levels between males (22.5 nmol/l) and females (24 nmol/l), p = 0.63. The median 25-(OH)D level in patients aged <65 was 31 nmol/l, 23 nmol/l in those aged 65–75, 24 nmol/l in those aged 75–85 and 21.5 nmol/l in those aged >85 (p = 0.608). DEXA scans of the hip showed that 23 % had osteopenia and 55 % had osteoporosis. The median 25-(OH)D level in patients with a normal DEXA scan was 45 nmol/l, compared to 21 nmol/l in those who had osteopenia and 24 nmol/l in those who had osteoporosis (p = 0.1).

**Discussion:** The results of this study show that there is a widespread prevalence of vitamin D deficiency in patients presenting with a neck of femur fracture. Vitamin D levels are lower in those with abnormal DEXA scan results. This highlights the universal prevalence of vitamin D deficiency in patients with a neck of femur fracture and the importance of instituting vitamin D replacement in this patient population at the first available opportunity.

## P175

### 3D-COP: A Novel Smartphone App To Help Differentiate Between Delirium, Dementia and Depression

Shane O'Hanlon, David Meagher

Graduate Entry Medical School, University of Limerick, Ireland

**Introduction:** Confusion is a commonly encountered clinical syndrome in older patients that can be difficult to manage, especially for health professionals with infrequent exposure to it. The presentation may be as a result of discrete conditions such as delirium/dementia/depression, or a combination. As a result the syndrome can be extremely difficult to disentangle, posing a barrier to optimal early management. We sought to expedite diagnosis by employing evidence-based screening tools in a user-friendly smartphone app whose use would be prompted by any observation that a patient “is not him/herself”.

**Methods:** A decision tree was constructed by two clinicians in psychiatry and geriatric medicine with experience of confusional states and their major causes. Screening tools that were validated for each condition were layered in a multi-directional algorithm. Using an iterative approach, a clinical decision support system architecture was designed that allowed for each condition to be tested for sequentially.

**Results:** The 3D-COP (Delirium, Dementia, Depression—Confused Older Person) clinical decision support system was successfully modelled. A functional smartphone app version has been created and is ready for clinical deployment. The decision support algorithm was tested successfully on case study histories and provides an intuitive pathway through early management of confusion. Usability testing was employed to ensure the final design was sensible, accessible and acceptable for end users.

**Discussion:** Differential diagnosis of confusion can be aided by a convenient smartphone app in case study situations. Clinical testing is underway.

## P176

### Five-Year Outcomes of Atrial Fibrillation-Related Stroke: The North Dublin Population Stroke Study

Derek Hayden<sup>1</sup>, Niamh Hannon<sup>1</sup>, Elizabeth Calley<sup>1</sup>, Danielle Ni Chroinin<sup>1</sup>, Orla Sheehan<sup>1</sup>, Michael Marnane<sup>1</sup>, Gillian Horgan<sup>1</sup>, Lorraine Kyne<sup>1</sup>, Joseph Duggan<sup>1</sup>, Eamon Dolan<sup>2</sup>, Timothy Lynch<sup>1</sup>, David Williams<sup>3</sup>, Sean Murphy<sup>1</sup>, Peter Kelly<sup>1</sup>

<sup>1</sup>Mater Misericordiae University Hospital, Dublin, Ireland, <sup>2</sup>Connolly Memorial Hospital, Dublin, Ireland, <sup>3</sup>Beaumont Hospital, Dublin, Ireland

**Introduction:** Atrial Fibrillation (AF) is a major risk factor for ischaemic stroke and its prevalence increases markedly with age. With ageing of populations in high income countries, the societal burden of AF-associated stroke is projected to increase. Population-based data on late fatality and functional outcome of AF-associated stroke are required to develop health policy and service approaches to respond to this increasing need. We aimed to investigate late outcomes of AF-associated stroke in the North Dublin Population based Stroke Study.

**Methods:** The NDPSS is a prospective cohort study in 294,592 Dublin residents. Over a 5-year follow up period we quantified fatality and functional outcome (Modified Rankin Scale (mRS)), in patients with AF and stroke (all stroke and ischaemic only) which occurred in the ascertainment period (2005–2006).

**Results:** 177 patients had AF related stroke. Of these 160 (90.4 %) were ischaemic, 13 (7.3 %) had intra-cerebral haemorrhage, 3 (1.7 %) were subarachnoid haemorrhages and 1 (0.6 %) was undetermined. In 172/177 (97 %) with available data, the 5-year case fatality rate was

61.6 % (95 % CI 54–69 %). 5-year functional status was available for 89.4 % (59/66) of survivors. Of these 66.1 % (95 % CI 53–78 %) were independent (mRS 0–3) and 42.4 % (95 % CI 30–56 %) had good outcome (mRS 0–2). 72 % of survivors were living at home while 26.2 % required either institutional accommodation or sheltered community accommodation. In 60/66 survivors (91 %) with data available, 45 % were on warfarin, 46.6 % anti-platelet agent, 70 % on antihypertensive, and 68 % statin treatment.

**Discussion:** 5-year survival after AF-stroke was 38.4 %, compared to 56 % for colorectal, 79 % for breast and 88 % for prostate cancer. Among survivors, almost 60 % had disability and one-third were dependent, with one-quarter in nursing home care. Prevention of AF associated stroke must be an international public-health priority, supported by policy measures and funding.

## P177

### What are the risk factors associated with Colles' fractures in the elderly?

Susan McAnallen<sup>1</sup>, James Mahon<sup>2</sup>, James Sweeney<sup>1</sup>, Kara Fitzgerald<sup>4</sup>, Georgina Steen<sup>4</sup>, Philip Ng<sup>2</sup>, Maeve O'Sullivan<sup>2</sup>, Conall Fitzgerald<sup>2</sup>, James Walsh<sup>1</sup>

<sup>1</sup>St. James's Hospital, Dublin, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland, <sup>3</sup>University College Dublin, Dublin, Ireland,

<sup>4</sup>Mercers Institute for Research on Ageing, Dublin, Ireland

**Introduction:** Colles fractures are a common problem amongst the elderly population, more prevalent than in their younger counterparts. There can be many risk factors associated with osteoporotic fractures, but in particular colles fractures are associated with falls as their causative mechanism.

The Osteoporosis and Bone Protection Clinic has been in operation since 2004 in attempt to address the bone protection of our elderly population and has built up an extensive database. Our aim was to identify potentially modifiable risk factors and co-morbidities for fracture and/or identify any new correlations.

**Methods:** Our database was interrogated to yield a cohort of 544 colles fractures attending the Bone clinic between 2004 and 2010. It looked at the effect of various co-morbidities and their prevalence amongst the colles fracture patients using simple descriptive statistics.

**Results:** 463 females, (85.11 %), 81males, (14.88 %). Of note, only 84 patients (15.45 %) were not on any bone protection. In order of decreasing prevalence, the commonest associated co-morbidities with colles fractures were falls: 154 patients, (28.30 %), visual impairment: 67patients, (12.32 %), COPD/Asthma: 58patients, (10.66 %), stroke: 27patients, (4.96 %), diabetes mellitus: 27patients, (4.96 %), cognitive impairment: 18patients, (3.31 %), atrial fibrillation: 14patients, (2.57 %), Parkinson's Disease: 11patients, (2.02 %).

**Discussion:** This study showed patients with past medical histories that included falls and visual impairment had the greatest association with fractures, highlighting the need to address these issues in anticipation of such events by aggressive modification of risk factors for falls. COPD was the next most associated, perhaps linked to the use of steroids and vulnerability of this population of patients to fracture. Stroke and diabetes had the same prevalence amongst the 544 patients, whilst known atrial fibrillation and Parkinson's disease were the next prevalent conditions. Findings warrant further research to investigate prevalence of these co-morbidities in Age-Match Controls.

## P178

### Appropriateness of Nursing Home Transfers to Acute Hospital

Ruth Martin<sup>1</sup>, Maura Moriarty<sup>3</sup>, Sarah Coveney<sup>3</sup>, Kathy O'Byrne<sup>2</sup>, Liam Healy<sup>1</sup>, Niamh O'Regan<sup>1</sup>, Ciara McGlade<sup>1</sup>, Josie Clare<sup>3</sup>, Suzanne Timmons<sup>1</sup>

<sup>1</sup>Mercy University Hospital, Cork, Ireland, <sup>2</sup>South Infirmary and Victoria University Hospital, Cork, Ireland, <sup>3</sup>Cork University Hospital, Cork, Ireland

**Introduction:** Nursing home (NH) residents are a frail and dependent population in whom hospital transfers are common near the end of life. Open communication, advanced care planning and adequate resources could enable the provision of more end-of-life care within the NH, and so prevent unnecessary and undesirable hospitalisation at the end of life. We investigated the appropriateness of admission of all patients in 2010, admitted from NH, who died in the three acute hospitals in Cork City.

**Methods:** The patient records were attained from Hospital in-Patient Enquiry (HIPE) data in Cork University Hospital, the Mercy University Hospital, and South Infirmary and Victoria University Hospital for all patients dying in hospital in 2010 that were coded as long term care residents on admission to hospital. Three investigators reviewed the charts independently and any ambiguities were discussed to improve accuracy.

**Results:** 45 records were obtained across the three hospitals. The average patient age was 83 years. 44 (98 %) had a life limiting illness, 19 (42 %) being severe. 28 patients (62 %) were severely unwell on admission and 20 (44 %) were judged to be gravely ill within the first 24 h. 22 (49 %) stayed unwell and never improved during the admission. 32 (71 %) had no specialised tests performed but the vast majority received intravenous antibiotics and fluids. Only 7 patients (16 %) could have been managed outside the acute hospital.

**Discussion:** The admission of this cohort of NH patients was unavoidable in most cases, and NH patients deserve full access to acute hospital services. However, with better supports, adequate symptom management for patients who were known to be dying could be provided in the NH, either avoiding a burdensome transition to hospital altogether, or facilitating a transfer back to the nursing home for patients in whom a decision for palliative care is made and death is not imminent.

## P179

### Estimated Glomerular Filtration Rate and Subtype of Stroke

Susan O'Callaghan, Affizal Samsudin, Mary Buckley, Hung Yui, Declan Lyons

Midwestern Regional Hospital, Limerick, Ireland

**Introduction:** Chronic kidney disease and cerebrovascular disease are major public health problems worldwide. It has been shown that people with a baseline eGFR <60 ml/min/1.73m<sup>2</sup> had an independent risk of future stroke that was 43 % greater than those with a normal baseline eGFR.<sup>1</sup> In fact, CKD is a strong independent predictor of

mortality and poor outcome in patients with acute stroke.<sup>2</sup> The associations between eGFR and haemorrhagic versus ischaemic stroke are less well understood.

The aim of this study was to review the eGFR of patients admitted with stroke and to examine the relationship between eGFR and subtype of stroke.

**Methods:** We used the MDRD equation to calculate the eGFR of 300 patients from our stroke database admitted to our Stroke Unit from 2002 to 2005. We looked at the incidence of ischaemic and haemorrhagic stroke relative to each stage of CKD.

**Results:** of 300 patients studied (145 female, 155 male), ranging from age 50–98, 84 % had ischaemic stroke and 16 % had haemorrhagic stroke. 14 % of all stroke patients had normal kidney function (eGFR >90 ml/min/1.73m<sup>2</sup>); 27 % of these were haemorrhagic and 73 % ischaemic. 47 % had Stage 2 CKD (eGFR 60–89 ml/min/1.73m<sup>2</sup>), 18 % haemorrhagic and 82 % ischaemic. 36 % had Stage 3 CKD (eGFR 30–59 ml/min/1.73m<sup>2</sup>), 10 % haemorrhagic and 90 % ischaemic. 3 % had Stage 4 CKD (eGFR 15–29 ml/min/1.73m<sup>2</sup>), 13 % haemorrhagic and 87 % ischaemic.

**Discussion:** An eGFR less than 60 ml/min/1.73m<sup>2</sup> is associated with stroke and the incidence of ischaemic stroke increases with a decreasing eGFR. This reiterates the importance of implementing cardiovascular risk strategies in people with known CKD to prevent future stroke.

#### References:

<sup>1</sup>Lee M et al (2010) Low glomerular filtration rate and risk of stroke: meta-analysis. *BMJ* 341:c4249

<sup>2</sup>Yahalom G et al (2009) Chronic kidney disease and clinical outcome in patients with acute stroke. *Stroke* 40:1296–1303.

## P180

### The Quick Activities of Daily Living Screen, Qadl: Presenting a New, Combined Basic and Instrumental ADL Tool to Predict Cognitive Impairment

Ronan O Caoimh, Steve Trawley, DWilliam Molloy

Centre for Gerontology & Rehabilitation, St. Finbarr's Hospital, Cork, Ireland

**Introduction:** Traditional cognitive screens focus on direct assessment of cognition. Cognitive impairment including dementia causes a progressive loss of instrumental through to basic activities of daily living (ADL). Mild cognitive impairment (MCI), though usually defined by the absence of functional impairment, is associated with subtle deficits in 31 %. Cognitive screening is limited by anxiety, (white coat effect), education, language and can vary considerably according to raters. We have developed a new cognitive screen that measures both independent and basic ADLs.

Our objective was to measure the inter-rater reliability (IRR) of a new, short ADL screening instrument, that measures both basic and instrumental activities of daily living, in order to predict cognitive impairment, in a population presenting with subjective memory loss.

**Methods:** Subjects, across the spectrum of cognitive impairment, from those with subjective memory loss but normal cognition to dementia, were recruited from a university hospital memory clinic, from March to April 2012. Cognitive impairment was diagnosed and graded clinically by a consultant geriatrician in conjunction with NINCDS and DSM-IV criteria. Two trained raters, blind to the final

diagnosis, independently scored the Qadl. IRR was measured using Cohans Kappa statistic (K).

**Results:** Total number of subjects was 31. Their median age was 70, interquartile range 9. The majority, 42 % had mild dementia ( $n = 13$ ). 26 % ( $n = 8$ ) had moderate dementia, 19 % ( $n = 6$ ) had MCI and 13 % ( $n = 4$ ) were normal. Calculated agreement between the two raters was high, 90 %. IRR using the observed reliability coefficient, Kappa, showed excellent agreement,  $K = 0.95$ .

**Discussion:** The Qadl is a short test, based upon a thorough functional assessment, used to aid the diagnosis of impaired cognition. This study demonstrates that the instrument has excellent IRR, suggesting that the Qadl is a reliable adjunct to cognitive instruments in the screening and diagnosis of cognitive impairment.

## P181

### Getting Geriatric Medicine Involved: A Re-Audit of a Medicine for the Elderly Consultation Service

Anna Sheane, Ann McCann, James Mahon, Jawhad Azam, David Crosby, Ann McHugh, David Robinson

*Mercers Institute for Research on Ageing, St. James's Hospital, Dublin, Ireland*

**Introduction:** A 2011 audit of the St. James's Hospital medicine for the elderly consultation service, showed significant delay between date of patient admission and date of geriatric consultation request. This delay may impact on patient mortality.<sup>1</sup> In response, an electronic consultation referral system was implemented. This re-audit aims to examine the effect of the electronic referral system on delay between patient admission and geriatric consultation request.

**Methods:** Six months of data was collected, between 01/09/2011 and 29/02/2012, from electronic referral system on the hospital EPR programme.

**Results:** 510 consultations for 370 individual patients. Average of 21.25 referrals per week (14.4 in 2011).  $\geq 2$  consultation requests sent on 103 patients. Of these 370 patients, 56 % of patients were female and 41 % male. Average patient age was 81.3 years, SD8.47. Medical teams were responsible for 78.2 % referrals (77.4 % in 2011), surgical teams referring 21.8 % (22.6 % in 2011).

Under reason for consult, 45 % (41.46 % in 2011) listed long term care (LTC) with 29 % (31 % in 2011) and 26 % (27.42 % in 2011) for rehabilitation and medical consultation respectively.

Average time between admission and initial consultation request was 26 days, SD34.48 (28 days in 2011). As expected, longest delay existed for LTC (42 days), while delay shortest, 13 days, for medical consultations (16 days in 2011). Average of 5.5 days, SD4.24 for registrar response to referral (5 days in 2011).

**Discussion:** The increase in total consultation requests and decreased delay from admission to initial consultation request suggests that the automated system has made geriatric services more accessible, which may positively impact on patient survival.<sup>1</sup> Of note,  $\geq 2$  consultation requests were received on  $>25$  % of patients. A further audit may be useful to identify reason for re-referral and further improve the medicine for the elderly consultation service.

#### Reference:

<sup>1</sup>Byrne DG (2010) Age and Ageing 39(6):694–698.

## P182

### Stratification of the Risk of Adverse Outcomes for Irish, Community Dwelling, Older Adults: Use of a Risk Register

Ronan O Caoimh<sup>1</sup>, Elizabeth Healy<sup>2</sup>, Elizabeth O Connell<sup>3</sup>, D.William Molloy<sup>1</sup>

<sup>1</sup>Centre for Gerontology & Rehabilitation, St Finbarr's Hospital, Cork, Ireland, <sup>2</sup>Ballincollig & Viaduct Public Health Centre, Cork, Ireland, <sup>3</sup>Mahon & Ballintemple Public Health Centre, Cork, Ireland

**Introduction:** Risk concerns the amount of potential harm that can be expected to occur at a set period of time, due to specific events. For older, community dwellers, this refers to the risk of adverse outcomes including hospitalisation, institutionalisation and death. In 2009 the Health Service Executive (HSE), issued best practice guidance for the development of risk registers, to capture information and structure the management of risk.

Our objectives was to investigate the demographics of older adults populating an Irish "risk register" and to examine the prevalence and characterisation of their risk.

**Methods:** We performed a retrospective review of an "older adult register" in a large, Irish public health nurse (PHN) sector, crossing the urban–rural divide. Entries were assessed for a 1 week period, in September 2011, to generate a "snapshot" of risk for that population. All individuals receiving on-going PHN surveillance were labelled "low" risk. Within this, "high risk" individuals were identified, according to cause of risk, from a separate "risk register".

**Results:** 783 individuals were included on the "older adult register", representing 20 % of the population, over 65 years, in the sector (CSO 2006). Median age was 80, Interquartile range (9), 36 % were male, 64 % female. 7 % ( $n = 55$ ) were identified as high risk on the "risk register", median age of 80 (8). This represents 1.4 % of the population in the sector over 65. Of these "social need" (living alone with little support), was the most common = 34 (64 %). Physical disability was the next most common 36 % ( $n = 20$ ). For those identified as high risk, 55 % ( $n = 30$ ), had more than one risk identified, the most frequent combination being "social need" with cognitive impairment,  $n = 8$  (15 %).

**Discussion:** A small percentage, 7 %, of community dwelling older adults were identified as high risk. Living alone with cognitive impairment was the most frequent risk combination. Promptly highlighting high risk cases should lead to improved targeting of limited resources.

## P183

### Appropriate Triage of Older Adults in the ED

Rosa McNamara<sup>2</sup>, Melinda Moses<sup>1</sup>, Fergal Cummins<sup>3</sup>

<sup>1</sup>University Hospital Limerick, Limerick, Ireland, <sup>2</sup>Graduate Entry Medical School, University of Limerick, Limerick, Ireland, <sup>3</sup>REDSPOT, Emergency Department, Limerick University Hospital, Limerick, Ireland

**Introduction:** Elderly patients comprise an increasingly large portion of cases presenting to emergency departments (ED) worldwide. Aged



65 years and over they account for 12–24 % of ED presentations, with a dramatic increase in attendance by 34 % between 1993 and 2003. With a greater likelihood of arrival by ambulance and of having an increased number of tests, they are 2.5–4.6 times more likely to be hospitalised. However, due to atypical presentations, it is not uncommon for frail, elderly patients to be under-triaged.

We wanted to establish which triage tool has is most effective for use with older patients presenting to the emergency department.

**Methods:** Six electronic databases were searched using the terms [[elderly.mp.OR aged.mp] AND triage.mp] AND [emergency department.mp] limit to humans and English language.

**Results:** Six triage tools were which had specifically been studied with regard to their utility in elderly patients. 3 were commonly used triage systems: the Manchester Triage (MTS), Emergency Severity Index triage instrument (ESI) and the Canadian Triage and Acuity Scale (CTAS). Both the MTS and ESI have been shown to under-triage older adults, while the CTAS had a higher ability to predict need for immediate life-saving interventions.

The remaining screening tools were identified the “Identification of Seniors at Risk” tool (ISAR), the Triage Risk Screening Tool (TRST) and the Variable Indicative of Placement risk (VIP). Both the ISAR and TRST tools showed good sensitivity and a high negative predictive value, but with low specificity and low positive predictive value. The sensitivity of VIP has been shown to be low.

**Discussion:** Traditional systems of Triage have been shown to under-triage older adults. Further research is needed to identify triage tools to correctly identify older people who require immediate medical care and those who may require additional support after ED attendance.

## P184

### Is Glycated Haemoglobin (HbA1c) a Useful Screening Tool for Diabetes Mellitus in Strokes and Tias?

James Mahon, Maria Smyth, Diarmuid O’Keeffe, Suzanne Walsh, Olivia Mahon, Karl Boyle, Joe Harbison

*Mercer’s Institute for Research on Ageing, St James’s Hospital, Dublin, Ireland*

**Introduction:** Diabetes mellitus (DM) is a risk factor for stroke, diagnosed measuring fasting and/or postprandial (pp) glucose or glycated haemoglobin (HbA1c); the latter a marker of medium-term glucose control.<sup>1</sup> Our Stroke and TIA Clinic measures fasting glucose (FG) and HbA1c on all new patients. Those with high HbA1c or FG, have oral glucose tolerance test (OGTT) performed. We aimed to examine if HbA1c is a more useful screening tool for diabetes than FG, in the context of stroke and TIA.

**Methods:** We reviewed from July 2010 to November 2011 the results of patients with paired FG and HbA1c. We examined OGTTs where HbA1c or FG was elevated. Laboratory reference ranges as follows: Normal FG <6.1 mmol/L; Impaired fasting glucose (IFG) 6.1–6.9 mmol/L; FG >6.9 mmol/L = DM; Normal 2 h pp glucose <7.8 mmol/L; 2 h pp glucose 7.8–11 mmol/L = impaired glucose tolerance (IGT); 2 h pp glucose >11 mmol/L = DM; Normal HbA1c 4.0–6.0

**Results:** 156 patients: 82 male, 74 female. Mean age was 68 (SD11.1). 35 had high HbA1c, of whom 16 had high FG. Of the 35 patients, 22 had OGTT done, 13 didn’t. 7 had normal OGTT, 5 had IGT and 10 had DM. 4 were diagnosed with DM based on high FG, all of whom had high HbA1c. Prevalence of DM was therefore 8.97 %. No significant difference in FG between 22 patients who had OGTT and those who didn’t (Student T test,  $p = 0.3$ ). Positive predictive value of high HbA1c to diagnose DM was 40 %.

**Discussion:** To screen for DM, HbA1c had 100 % sensitivity, compared to 79 % sensitivity of FG. Our research was limited by not all patients having OGTT. We recommend further research into HbA1c as a DM screening tool in stroke.

#### Reference:

<sup>1</sup>Use of HbA1c in Diagnosis of DM, WHO/NMH/CHP/CPM/11.1 2011.

## P185

### The Occurrence of Hypercalcaemia in Patients Commencing Recombinant Parathyroid Hormone (1–34 and 1–84) Therapy

James Mahon, Najia Siddique, Georgina Steen, Kara Fitzgerald, James Sweeney, Susan McAnallen, Elizabeth McCarron, J Bernard Walsh, Miriam Casey

*Bone Health Service, Mercer’s Institute for Research on Ageing, St James’s Hospital, Dublin, Ireland*

**Introduction:** Recombinant parathyroid hormone therapy—rPTH 1–34 (Forsteo) and rPTH 1–84 (Preotact)—are being increasingly used for treatment of severe postmenopausal osteoporosis.

Foremost amongst side effects of these drugs is hypercalcaemia, which has a reported prevalence as high as 11 % in some studies. We investigated the prevalence of hypercalcaemia in patients in our bone clinic receiving PTH therapy.

**Methods:** From the database our Osteoporosis Treatment and Bone Protection Clinic, we performed a retrospective review of blood results from all patients prescribed rPTH 2004–2011, subdivided by group (1–34 and 1–84). We checked for occurrence of hypercalcaemia during treatment and compared baseline calcium to follow-up samples where available (between 6 and 12 months into therapy). Local laboratories reference range for serum calcium: 2.20–2.70 mmol/l. Calcium was corrected for albumin. Patients were also taking cholecalciferol 800 units and calcium 1,000 mg daily supplements.

**Results:** 280 patients prescribed 1–34 (Forsteo); 179 prescribed 1–84 (Preotact). In the 1–34 group, hypercalcaemia occurred in 6 patients (2.1 %); mean baseline serum calcium was 2.32 mmol/l (SD 0.15), and 2.35 mmol/l (SD 0.13) at follow-up. In the 1–84 group, baseline calcium was 2.25 mmol/l (SD 0.10), and 2.41 mmol/l (SD 0.20) at follow-up; in this group hypercalcaemia occurred in 20 patients (11.2 %). However, hypercalcaemia was milder in the 1–84 group (mean 2.84 mmol/l) compared to the 1–34 group where mean hypercalcaemia was 3.06 mmol/l.

**Discussion:** Prevalence of new hypercalcaemia was similar to that in other studies, and was mild. Taking the group as a whole, there was no significant difference between mean serum calcium at baseline and follow-up. The difference in occurrence of hypercalcaemia between the two drug groups may be accounted for by the fact that abnormal results were recorded in different time periods, and that many of the 1–84 group were also prescribed protein supplement drinks.

## P186

### The National Stroke Awareness Campaign: A Stroke of Success?

Irene Hartigan, Liz O’Connell, Brid Kilonzo, Sinead O’Brien, Elizabeth Weathers, Nicola Cornally, Geraldine McCarthy

University College Cork, Cork, Ireland

**Introduction:** The FAST acronym refers to the main symptoms of stroke—Facial weakness, Arm weakness and Speech problems, along with the warning that Time is critical therefore call the emergency services. The launch of the FAST Campaign by the Irish Heart Foundation in May 2010 sought to increase awareness of the warning signs of stroke and the need to treat stroke as a medical emergency. We aimed to identify the influence of the campaign on the public's recognition of the warning signs for stroke.

**Methods:** A descriptive pre and post comparative study design was conducted. Phase one was conducted in April 2010 prior to the campaign. Data was collected on a cross-section of the public ( $n = 1,925$ ) to obtain knowledge on stroke warning signs. Phase two involved collecting data from participants ( $n = 688$ ) 18 months after the campaign launch.

**Results:** The age range of the majority of participants from both phases was between 30 and 50 years. Results from phase two reported that 93 % heard or saw the campaign yet only 37 % could recall the campaign name or the slogan. Participants were shown a list of symptoms and asked to identify which were stroke symptoms (table one). Logistic regression was also conducted to assess the influence of a number of factors on knowledge.

Table 1 Internationally recognised statements describing stroke symptoms.

**Discussion:** From these results, the campaign was successful, given the high percentage of participants recall and the increase in the recognition of stroke symptoms. The name of the campaign 'FAST' had a significant impact on the knowledge and action of participants. Future awareness campaigns need to target older adults.

## P187

### The Impact of Advancing Age on Coronary Disease Prevalence and Associated Mortality in End Stage Kidney Disease

Shane O'Hanlon<sup>1</sup>, Rosa McNamara<sup>2</sup>, Ahad Abdalla<sup>3</sup>, Liam Casserly<sup>3</sup>, Con Cronin<sup>3</sup>, Declan Lyons<sup>1</sup>, Austin G Stack<sup>3</sup>

<sup>1</sup>Division of Ageing and Therapeutics, Department of Medicine, University Hospital Limerick, Limerick, Ireland, <sup>2</sup>Graduate Entry Medical School, University of Limerick, Limerick, Ireland, <sup>3</sup>Department of Nephrology, University Hospital Limerick, Limerick, Ireland

**Introduction:** Coronary disease is an independent risk factor for death in end-stage kidney disease (ESKD). The impact of coronary disease on an aging dialysis population is unclear although it is postulated but not proven that the mortality risks increase with advancing age. The purpose of this study was to determine the contribution of age to coronary disease prevalence and associated mortality in a contemporary national cohort.

**Methods:** National incidence data on all new dialysis patients ( $N = 823,753$ ), between May 1995 and December 2004 and followed until October 2006, were analysed from the US Renal Data System. Age specific prevalence and 1-year mortality rates were determined for each of 7 age groups (18–40, 40–50, 50–60, 60–70, 70–80, 80–90 and >90) and relative hazard ratios (RR) were calculated for those with and without coronary disease using multivariable Cox regression. All analyses were adjusted for 21 demographic, clinical, socioeconomic and laboratory indicators.

**Results:** Coronary disease peaked in the 70–80 year range (35.5 %). Age-specific death rates were highest in the group over 90 years, in both those with (1,074 per 1,000 person years) and without (893 per 1,000 person years) coronary disease. The relative risk of death reduced sequentially in each decade, from 1.77 in those under 40 years to 1.19 in those over 90.

**Discussion:** The prevalence of coronary disease increased with advancing age up to the seventh decade and declined thereafter. Mortality impact was greatest for younger compared to older patients. Whether this reflects differences in disease detection and severity, patient compliance or interventional strategies across age groups needs to be further evaluated.

## P188

### A Review of Deaths in the ED

Rosa McNamara<sup>1</sup>, Grainne Ni Mhaille<sup>2</sup>, Fergal Cummins<sup>3</sup>

<sup>1</sup>Graduate Entry Medical School, University of Limerick, Limerick, Ireland, <sup>2</sup>University Hospital Limerick, Limerick, Ireland, <sup>3</sup>REDSPOT, Emergency Department, Limerick University Hospital, Limerick, Ireland

**Introduction:** Mortality rates within emergency departments (EDs) vary for a number of reasons. We wished to review the deaths which occurred in the department in 2011, a period of high inpatient boarding. We were specifically interested in the characteristics of older adults who died in the ED.

**Methods:** We used the electronic patient tracking system, Maxims to identify those who had died in the department. Review of the scanned ED notes was then undertaken.

**Results:** The ED at University Hospital Limerick saw 57,845 patients in 2011. 9,986 (17.26 %) were aged over 64 years old. 70 deaths occurred in the department during 2011, including 33 patients aged  $\geq 65$  years. The majority of patients aged  $\geq 65$  (22 (66.6 %)) who died in the department presented in cardiac arrest. The remainder presented with; headache 2, abdominal pain 3, respiratory failure 3, sepsis 1, stroke 1, chest pain 1. In 7 patients an early decision regarding the appropriate ceiling of treatment was made. For those patients who did not present in cardiac arrest (15 patients) or who recovered spontaneous circulation (1 patient) the average time spent in the ED was 454.94 min (range 8–1,707 min). For the patients aged  $\geq 65$  in this group the average time spent in the ED was 423.27 min (range 8–1,437). 6 patients aged  $\geq 65$  and one patient aged 60 were nursing home residents. 3 of these patients presented in cardiac arrest pre-hospital. The remaining 4 patients suffered arrest in the ED (average time in ED 242.3 min).

**Discussion:** Time spent in the ED was unacceptably long. Although beyond the scope of this study to examine if these deaths were preventable, the impact of inpatient boarding on mortality has been previously well documented. Further efforts need to be made to streamline care to avoid potential adverse outcomes.

## P189

### Ageism in Head and Neck Cancer (HNC): Fact or Fiction?

Eleanor O'Sullivan

University College Cork, Cork, Ireland

**Introduction:** Cancer survival is a complex issue determined by tumour aggressiveness, therapeutic intervention and patient's ability to withstand treatment. The prognostic significance of patient age at presentation has been explored by many authors, with conflicting results. The controversy is compounded by suggestions that elderly patients are frequently given less aggressive treatment, may receive sub-standard care, and are denied adjuvant therapy. This study explores the existence and effects of ageism in Irish HNC patients.

**Methods:** Retrospective analysis was undertaken on all HNC cases (n = 6,037), (ICD-10 C00-C14, C32) identified by the Irish population-based cancer registry (NCRI), from 1994 to 2008. Analysis of cases (n, 388) from 1983 to 1990 identified by the STR, a population-based cancer registry which preceded the NCRI, was used to inform this study.

**Results:** Despite considerable therapeutic intervention, overall survival was extremely poor, with a high rate of early attrition (28.6 %). Survival fell with advancing age, with highly significant differences observed at 1, 2, 3 and 5 years ( $p < 0.000$ ). For patients under 65 years the 1, 2, 3-year relative survival rates were 79, 64.5 and 56.7 %; corresponding rates for those aged 65–74 years were 71, 55.2 and 38.2 % while those aged 75–99 years had a much less favourable outcome (53.3, 38.2 and 29.4 %),  $p < 0.000$ . Analysis of therapeutic intervention revealed significant differences in treatment delivery patterns for patients under/over 65 years. Elderly patients received significantly lower rates of surgery (38.7 vs. 53 % for patients under 65 years), ( $p < 0.000$ ). Usage of radiotherapy, chemotherapy and combined modality care declined significantly with patient age,  $p < 0.000$ , with 24.7 % of those aged 75–99 years receiving no active intervention versus 7.2 % under 65 years,  $p < 0.000$ .

**Discussion:** Evidence suggests a less aggressive approach may be adopted in the care of elderly HNC patients, resulting in poorer outcomes. Access to optimal care must be based on physiological, not chronological, age.

## P190

### Age Friendly Communities: Perceived Ageism Among Community Based Adults

Aoife Bailey, Amina Jaji, Elaine Crosby, Patricia Greville, Yohanca Skeet, Ann O'Hanlon, Rodd Bond

Netwell Centre, Dundalk Institute of Technology, Dundalk, Ireland

**Introduction:** People who experience ageism, or age discrimination, are more likely to be depressed (Murphy, 2008), lonely (Coudin & Alexopoulos, 2010) and have poorer quality of life. There is a growing body of evidence to indicate relatively high levels of discrimination towards older people in healthcare (Anderson, 2012), but less is known about the prevalence and impact of ageism in the community particularly with staff in shops, banks or post offices, and pubs or restaurants.

**Methods:** Community based adults aged 50+ years were recruited from the north east coast of Ireland using convenience sampling (n = 110). Participants were asked to indicate their frequency of attendance with health (e.g. general practitioner (GP), hospital, opticians) and community professionals (e.g. shops, churches, pubs and

hotels). Participants were also asked to indicate how friendly staff were, and how easy it is, or would be, to access these services (with higher numbers indicating easier access or greater friendliness). Additional measures of age friendliness (WHO 2006) were used from the Louth Age Friendly Survey (n = 1,000).

**Results:** Results indicated moderate to high levels of perceived ageism for services which are essential to enabling older adults remain in their own homes. These included perceptions of ageism from the guards (50 % of the sample) and public health nurses (40 %). The most supportive and non-ageist services were from the small local shops (8 % reporting low support), with hotels, cafes, chemists and churches also largely being perceived as being supportive and non-ageist (8–17 %).

**Discussion:** Tackling ageism is a key challenge for health and community professionals. Perceptions of ageism can mean older people do not attend key services so frequently, hence leading to reductions in health and quality of life. Unless tackled, business and service professional groups are also likely to do less well economically, given reduced custom at a time of economic uncertainty.

## P191

### Telehealth Improves Health and Self-Care Behaviours Among Patients with Diabetes and Heart Disease

Ann O'Hanlon<sup>1</sup>, Brian O'Mullane<sup>1</sup>, Ben Knapp<sup>2</sup>, Rodd Bond<sup>1</sup>

<sup>1</sup>Netwell Centre, Dundalk Institute of Technology, Dundalk, Ireland,

<sup>2</sup>Institute for Creativity, Arts, and Technology, Virginia Tech., USA

**Introduction:** Telehealth has the potential to enhance adults' well-being, and enable people to age-in-place, yet little is known about older adults' attitudes and use towards such technology. The current study draws on the Technology Acceptance Model to examine the views of older Irish adults to telehealth, and associations with each of physical health, psychosocial well-being, and self-care behaviours.

**Methods:** A repeated measures experimental design was used in which hospital patients were randomised to experimental (n = 30) or routine care (n = 10). Patients were equally grouped into those with diabetes (n = 20) and those with heart disease. Each participant in the experimental group used The Health Buddy<sup>®</sup> Appliance; this is a telehealth device that collects and transmits information via a conventional telephone line to a triage nurse.

Additional survey and interview data was collected at 3 months (at trial end).

**Results:** Although the sample was unused to technology, attitudes towards the device were generally positive. Underpinning positive attitudes were perceptions of usefulness and ease-of-use of the device. Additionally participants were reassured to have the support of the triage nurse. The device was associated with significant health improvements for both patient groups.

**Discussion:** Telehealth has the potential to improve health and well-being amongst vulnerable older adults, and reduce morbidity and mortality rates. Older people hold positive attitudes towards telehealth once they understand its potential benefits. Among a vulnerable sample, The Health Buddy<sup>®</sup> Appliance was very easy to use and was sufficient to enable many participants to take a more positive and proactive control over their health.

## P192

**Outcomes of Tilt Table Testing in the Diagnosis of Syncope: A Single Centre Experience**

Roisin Colleran, Joseph Sheehan, Antoinette Larkin, Teresa Donnelly

*Portiuncula Hospital, Ballinasloe, Ireland*

**Introduction:** Syncope is defined as loss of consciousness due to transient global cerebral hypoperfusion characterized by rapid onset, short duration, and spontaneous complete recovery. The use of specifically designated units in the evaluation of syncope has been shown to reduce hospital admissions and length of stay. A Syncope unit was established in Portiuncula Hospital, Ballinasloe in 2009. The unit accepts patients for investigation with unexplained falls and syncope. The tests performed include Head up Tilt (HUT), Prolonged Tilt (PT) and Carotid Sinus Massage (CSM).

The purpose of this study was two-fold. Firstly, to review diagnostic outcomes in patients who underwent syncope studies in the unit for the investigation of syncope/presyncope and secondly, to look at treatment modalities implemented in light of test results.

**Methods:** This was a retrospective analysis of haemodynamic changes in response to tilt table testing recorded by a non-invasive volume clamp technique (finometer). The following diagnoses were made Orthostatic Hypotension (OH), Carotid Sinus Syndrome (CSS), Neurocardiogenic Syncope (NCS) and Postural Orthostatic Tachycardia syndrome (POTS). Treatment modalities were then examined.

**Results:** Since January 2010 a total of 252 patients underwent syncope investigation. Mean age was 69 years. Male to female ratio was 1:1.7. Of those with a positive study, 41 (30.8 %) had OH; 26 (19.5 %) had NCS; 24 (18.0 %) had POTS, 42 (31.6 %) had CSS, 39 of these (92.9 %) having a predominantly vasodepressor response and 3 (7.1 %) having a predominantly cardio-inhibitory response. 2 patients (1.5 %) had cough syncope.

Treatment in those with a positive syncope study included midodrine (21 patients, 15.8 %), fludrocortisone (36 patients, 27 %), counter-maneuvres (110 patients, 82.7 %), beta-blockers (8 patients, 6 %), pacemaker (2 patients, 1.5 %), and compression stockings (10 patients, 7.5 %).

**Discussion:** This study confirms a high prevalence of neurovascular instability. A broad spectrum of treatment was started in all patients with a positive diagnosis.

## P193

**Examining the Predictive Power of the FRAX Score: Findings from the Irish Longitudinal Study on Ageing**

Ciaran Finucane<sup>1</sup>, Joseph Browne<sup>3</sup>, Hilary Cronin<sup>1</sup>, Rose Anne Kenny<sup>2</sup>, Bernard Walsh<sup>2</sup>

<sup>1</sup>TILDA, Trinity College Dublin, Dublin, Ireland, <sup>2</sup>Mercers Institute for Successful Ageing, St James's Hospital, Dublin, Ireland, <sup>3</sup>Department of General Medicine, Tralee General Hospital, Kerry, Ireland

**Introduction:** Osteoporotic fractures pose a significant public health issue, associated with significant increases in morbidity and mortality. The WHO Fracture risk assessment tool (FRAX) allows calculation of a 10-year probability risk enabling community based identification of individuals at high risk of fracture. However its validity in a nationally representative sample of older adults in Ireland has yet to be assessed.

**Methods:** A sample of older Irish adults aged >50 (n = 8,178) was recruited as part of the Irish Longitudinal study on Ageing (TILDA). Both in-home computer aided personal interviewing (CAPI) and objective health and home centre based assessments were used for data collection. Participants were asked to self-report a previous fracture, frequency of smoking and alcohol intake and a doctor's diagnosis of rheumatoid arthritis. Medication use and co morbidities which predispose to secondary osteoporosis were also documented. Heel bone ultrasound measurements were taken. FRAX variables were entered into a logistic regression and used to predict the probability of having a fracture. Models were compared using ROC, specificity and sensitivity measures.

**Results:** Data from N = 4,397 subjects was available for analysis. Prediction using age and stiffness measures alone demonstrates an AUC of 0.536 and sensitivity and specificity of 57.8 and 63.4 %. The FRAX score demonstrated an AUC of 0.618, with a sensitivity and specificity of 49.1 and 74.3 % respectively. Gender differences existed in FRAX performance. FRAX had a sensitivity and specificity of 76.2 and 50 % respectively for men and a sensitivity and specificity of 67.3 and 43.2 % respectively for women.

**Discussion:** FRAX and stiffness measures alone are at most moderate predictors of hip fractures cross-sectionally and demonstrate differential results across gender in an Irish population. Future work will examine refinements of this model to improve its fracture risk prediction power.